DISPOSAL OF LOUISVILLE, KY., RUBBER PLANT

UNIVERSITY OF MICHIGAN
MAR 21 1956
MAIN READING ROOM

HEARING

BEFORE A

SUBCOMMITTEE OF THE COMMITTEE ON BANKING AND CURRENCY UNITED STATES SENATE

EIGHTY-FOURTH CONGRESS

SECOND SESSION

ON

S. 3091

A BILL TO PERMIT THE DISPOSAL OF PLANCOR NO. 1207, AT LOUISVILLE, KY., AND CATALYST EQUIPMENT AT BALTIMORE, MD.

MARCH 9, 1956

Printed for the use of the Committee on Banking and Currency

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CONTENTS

	Page
S. 3091	1
Amendment	2
Statement of—	
Brown, Lawrence R., Publicker Industries, Inc., Philadelphia, Pa.	14
Clements Earle C., a United States Senator from the State of Kentucky	3
Hemphill, A. W., production manager, Howard Spering and Raymond S. Clark, counsel, Davison Chemical Co., Baltimore, Md.	22
Irwin, G. J., Director, Office of Synthetic Rubber, Federal Facilities Corporation	10
Sheehan, Harold W., General Counsel and Acting Secretary, Rubber Producing Facilities Disposal Commission	7
Letters, reports, etc., submitted for the record by—	
Beall, J. Glenn, a United States Senator from the State of Maryland: Statement	23
Clements, Earle C., a United States Senator from the State of Kentucky: Letter to Senator Frear	23
Federal Facilities Corporation:	
Letter to chairman, February 14, 1956	8
Letter to committee, March 8, 1956	9
Frear, J. Allen, Jr., a United States Senator from the State of Delaware:	
Announcement of hearings from Congressional Record	3
Article from Chemical Week, Poser: Will There Be Enough Butadiene?	11
Rubber Producing Facilities Disposal Commission:	
Comments on S. 3091	6
Brochure, Government-owned synthetic rubber facility, plancor 1207, Louisville, Ky	25
Brochure, Government-owned synthetic rubber facility, Baltimore, Md	47
Lease between Commission and Publicker Industries, Inc	54
Protection and maintenance contract between Commission and Publicker Industries, Inc	59
Treasury Department, Comments on S. 3091	9

CONTENTS

Page

8, 1951 1
Amendment 2
Statement of—
Brown, Lawrence R., Publishers Typographers, Inc., Philadelphia, Pa. 14
Clements, Earle C., a United States Senator from the State of Kentucky 3
Hemphill, A. W., producing manager, Howard Sporting and Exercised Goods, Clark, counsel, Dayton Rubber Co., Baltimore, Md. 22
Irvin, C. J., Director, Office of Public Roads, Federal Facilities Corporation 10
Sheehan, Harold W., General Counsel and Acting Secretary, Rubber Producing Facilities Disposal Commission 7
Letters, reports, etc., submitted for the record by—
Neal, J. Clem, a United States Senator from the State of Maryland 23
Statement 23
Clements, Earle C., a United States Senator from the State of Kentucky: Letter to Senator Frear 23
Federal Facilities Corporation:
Letter to chairman, February 12, 1952 8
Letter to committee, March 8, 1952 9
Frear, J. Allen, Jr., a United States Senator from the State of Delaware: Amendment of foreign trade and commercial Record 3
Article from Chemical Week, Issue: With This Big Enough Bungalow? 11
Rubber Producing Facilities Disposal Commission:
Comments on S. 3091 6
Brochure, Government-owned synthetic rubber facility, plant no. 1207, Louisville, Ky. 25
Brochure, Government-owned synthetic rubber facility, Baytown, Texas 17
Lease between Commission and Publicker Industries, Inc. 44
Provision and implementing contract between Commission and Publicker Industries, Inc. 39
Treasury Department: Statement on S. 3091 9

DISPOSAL OF LOUISVILLE, KY., RUBBER PLANT

FRIDAY, MARCH 9, 1956

UNITED STATES SENATE,
COMMITTEE ON BANKING AND CURRENCY,
SUBCOMMITTEE ON PRODUCTION AND STABILAZATION,
Washington, D. C.

The subcommittee met, pursuant to call, in room 301, Senate Office Building, at 9:30 a. m., Senator J. Allen Frear, Jr. (chairman of the subcommittee) presiding.

Present: Senators Frear and Capehart.

Also present: Senators Beall and Clements.

Senator FREAR. The subcommittee will come to order.

The subcommittee has before it this morning S. 3091, a bill to permit disposal of the alcohol butadiene plant at Louisville, Ky., together with Senator Beall's amendment to S. 3091 which would permit the disposal of certain related equipment at Baltimore, Md.

The Rubber Producing Facilities Disposal Commission, which would conduct these sales under S. 3091 and Senator Beall's amendment, goes out of existence, I believe, on March 22, 1956, under existing legislation.

We have scheduled this hearing this morning so the bill can be considered and, if appropriate, enacted before the termination of the Commission.

I should like to insert in the record at this point S. 3091 and Senator Beall's amendment, together with the notice of hearing published in the Congressional Record of February 22. The date of the hearing given in the notice was changed until today

(The documents referred to follow:)

[S. 3091, 84th Cong., 2d sess.]

A BILL To amend the Rubber Producing Facilities Disposal Act of 1953, as heretofore amended, so as to permit the disposal thereunder of Plancor Numbered 1207 at Louisville, Kentucky.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Rubber Producing Facilities Disposal Act of 1953, as heretofore amended, is amended by adding at the end thereof the following new section:

"SEC. 27. (a) Notwithstanding the second sentence of section 7 (a), the period for receipt of proposals for the purchase of the Government-owned rubber-producing facility at Louisville, Kentucky, known as Plancor Numbered 1207 and hereinafter referred to as the 'Louisville plant', shall not expire until the end of the thirty-day period which begins on the date of the enactment of this section.

"(b) If one or more proposals are received for the purchase of the Louisville plant within the time period specified in subsection (a), the Commission, notwithstanding the expiration of the period for negotiation specified in section 7 (f), shall negotiate with those submitting the proposals for a period of not to exceed forty-five days for the purpose of entering into a contract of sale.

"(c) Within ten days after the termination of the actual negotiation period referred to in subsection (b), or, if Congress is not then in session, within ten days after Congress next convenes, the Commission shall prepare and submit

to the Congress a report containing, with respect to the disposal under this section of the Louisville plant, the information described in paragraphs 1, 2, 3, 4, and 8 of section 9 (a). Unless the contract is disapproved by either House of the Congress by a resolution prior to the expiration of thirty days of continuous session (as defined in section 9 (c)) of the Congress following the date upon which the report is submitted to it, upon the expiration of such thirty-day period the contract shall become fully effective and the Commission shall proceed to carry it out, and transfer of possession of the facility sold shall be made as soon as practicable but in any event within thirty days after the expiration or termination of the existing lease on the Louisville plant. The failure to complete transfer of possession within thirty days after expiration or termination of the existing lease shall not give rise to or be the basis of rescission of the contract of sale."

SEC. 2. Notwithstanding the provisions of section 3 (d) of the Rubber Producing Facilities Disposal Act of 1953, the Rubber Producing Facilities Disposal Commission (hereinafter referred to as the "Commission") before submission to the Congress of its report relative to the Louisville plant, shall submit it to the Attorney General, who shall, within seven days after receiving the report, advise the Commission whether, in his opinion, the proposed disposition, if carried out, will violate the antitrust laws.

SEC. 3. Notwithstanding the provisions of section 4 of Public Law 336, Eighty-fourth Congress, approved August 9, 1955, of section 4 of Public Law 19, Eighty-fourth Congress, approved March 31, 1955, and section 20 of the Rubber Producing Facilities Disposal Act of 1953, the Commission established by the last mentioned Act shall cease to exist at the close of the ninetieth day following the termination of the review period provided for in section 27 (c) of that Act, unless no sale of the Louisville plant is recommended by the Commission pursuant to section 27 (c) of that Act, in which event the Commission shall cease to exist at the close of the ninetieth day following the termination of the maximum period allowed for negotiation in section 27 (b).

SEC. 4. Notwithstanding the provisions of section 9 (d) and notwithstanding the period of lease limitation in section 9 (f) of the Rubber Producing Facilities Disposal Act of 1953, the Commission or its successor may, provided the period for receipt of proposals for the purchase of the Louisville plant has expired as provided in section 27 (a) of that Act and no proposal or contract for the purchase of the Louisville plant is then pending or in effect, extend the existing lease or enter into a new lease on the Louisville plant for a term of not less than five years nor more than fifteen years from the date of termination of said existing lease.

SEC. 5. Except as otherwise provided in this Act, the disposal or lease of the Louisville plant shall be fully subject to all the provisions of the Rubber Producing Facilities Disposal Act of 1953 and such criteria as have been established by the Commission in handling disposal of other Government-owned rubber producing facilities under that Act: *Provided*, That the provisions of sections 7 (j), 7 (k), 10, 15, and 24 of that Act shall not apply to the disposal or lease of the Louisville plant.

[S. 3091, 84th Cong., 2d sess.]

AMENDMENT Intended to be proposed by MR. BEALL to the bill (S. 3091) to amend the Rubber Producing Facilities Disposal Act of 1953, as heretofore amended, so as to permit the disposal thereunder of Plancor Numbered 1207 at Louisville, Kentucky, viz: On page 4, after line 23, insert the following:

SEC. 6. (a) Notwithstanding any provision of the Rubber Producing Facilities Disposal Act of 1953, as amended, or of this Act, the Rubber Producing Facilities Disposal Commission may enter into contracts of sale and may from time to time enter into leases for all or any part of the catalyst manufacturing equipment now situated in Baltimore, Maryland, and generally described in the Commission's brochure M–2 dated March 1954.

(b) Except as provided in this paragraph, each such lease or contract may be made on such terms and conditions, including type of use and duration (up to fifteen years) of any lease, as the Commission deems advisable in the public interest. Before making such sale or lease, the Commission shall secure the advice of the Attorney General as to whether the proposed sale or lease would tend to create or maintain a situation inconsistent with the antitrust laws. Each such lease or contract of sale shall contain a national security clause, containing such terms and for such duration (ten years or less) as the Commission deems desirable

in the public interest, and any such lease shall provide for the recapture of the equipment thereby leased and the termination of the lease, if the President determines that the national interest so requires.

The price for any part or all of such equipment shall be an amount which the Commission determines to be the maximum amount obtainable in the public interest, but not less than fair value as determined by the Commission.

(c) Any of such equipment not sold or leased under subsection (a) shall be placed and maintained in adequate standby condition pursuant to, and be otherwise subject to, the provisions of section 8 of the Rubber Producing Facilities Disposal Act of 1953 (other than the provision prohibiting leases).

(d) All the powers and authority conferred by this section upon the Commission may, after the termination of the existence of the Commission, be exercised by such agency of the Government as the President may designate for the purpose, and for this purpose such successor agency may exercise all the authority conferred in the Rubber Producing Facilities Disposal Act of 1953 upon the Commission.

[From the Congressional Record, Senate, February 22, 1956]

NOTICE OF HEARING ON S. 3091, TO AMEND THE RUBBER PRODUCING FACILITIES DISPOSAL ACT

Mr. FULBRIGHT. Mr. President, I desire to give notice that a public hearing will be held by the Subcommittee on Production and Stabilization of the Committee on Banking and Currency on the bill (S. 3091) to amend the Rubber Producing Facilities Disposal Act so as to permit the sale or lease of the alcohol butadiene plant at Louisville, Ky. The hearing will be held on February 28, 1956, in room 301, Senate Office Building.

All persons who desire to appear and testify at the hearing are requested to notify Mr. J. H. Yingling, chief clerk, Senate Committee on Banking and Currency, 303 Senate Office Building, Washington, D. C., telephone, National 8-3120, extension 865, as soon as possible, and, in any event, before the close of business on Monday, February 27, 1956.

Senator FREAR. Certainly we deem it a great privilege to have as our first witness this morning the Senator from Kentucky, Senator Earle Clements.

STATEMENT OF EARLE C. CLEMENTS, A UNITED STATES SENATOR FROM THE STATE OF KENTUCKY

Senator CLEMENTS. Thank you, Mr. Chairman. I assure you that the Senator from Kentucky is pleased at the opportunity that you have given him to appear before the committee.

You have been generous in accommodating me in this way and at this hour. Nobody can understand any better than the chairman of this committee why I say that. There are a number of other committee meetings on the Hill this morning at 10 o'clock, and the Senate also is to convene at the hour of 10.

Mr. Chairman, as you are aware, the bill contains provisions for a definite time schedule which makes early consideration necessary should the subcommittee agree with me that the legislation is desirable.

I am glad you mentioned the date the Commission goes out of existence, because it indicates so clearly the necessity for speed in the consideration of this measure. I believe you mentioned it is March 22.

Senator FREAR. Yes, sir.

Senator CLEMENTS. The bill would authorize a sale or a long-term lease of the alcohol butadiene-producing plant at Louisville, Ky. In addition to being the last of the Government-owned synthetic rubber-

producing facilities, it is 1 of 3 butadiene plants constructed to produce that material from alcohol. One was sold immediately following the war, and the other alcohol-butadiene plant, located at Kobuta, Pa., was sold in 1955 under a 10-year national security clause. That plant now is in standby. Petroleum is the product used in an alternative process for producing butadiene, a necessary ingredient in the production of synthetic rubber.

No offers to buy the Louisville facility were received during the disposal period of 1954 and 1955. The production of butadiene from alcohol is not as economical as production from petroleum. However, because of the present great demand for butadiene, it would appear that this is a more propitious time to offer the plant for sale than upon former occasions.

Of course, the desirability of keeping the Louisville plant in a position to contribute to our domestic production of rubber in the event of a national emergency is in my judgment, Mr. Chairman, beyond question. A sale to private industry will add to our Nation's rubber-producing capacity and at the same time will relieve the Government to a considerable extent in maintaining the facility in standby condition.

The Louisville plant has three independent production units. In November, December, and January, 1955–56, the average monthly cost for keeping 2 units in standby was approximately $8,000 per unit, or $16,000 per month for both units. Based on these figures, Mr. Chairman, the annual cost for the total plant on a standby basis would be $288,000 a year.

In the event that no satisfactory bids are received for purchase of the Louisville facility, in our judgment—I say "our" judgment, and I speak this morning not only for myself but the coauthor of this bill, my distinguished colleague, Senator Barkley—a long-term lease of the facility would be advantageous to the Government.

At the present time, the plant is under lease to the Publicker Industries, Inc., and the lease expires in 1958. The existing law authorizes a lease of alcohol-butadiene plants, but the maximum period for any lease is 3 years, and a lease may not be renewed prior to its expiration.

Should all three units of the Louisville plant be in full production under a lease based on the terms of the present law, I am advised that the return to the Government per month would be $15,000 per unit, or $45,000. Over a period of a year under such circumstances, the Government would realize an income of $540,000 and would be relieved of the standby cost. The plant in full production under such a lease, as contrasted with the plant idle in standby, would amount to an annual saving to the Government of $828,000.

The short term of 3 years of the present lease of the Louisville plant, as I have been advised, has caused many difficulties in its operation. Not only are long-term contracts of purchase and sale impossible, but also long-term labor contracts. And it is important that a long-term management-labor relations contract be developed. Capital expenditures made by the lessee must be amortized over a very short period, which, as the chairman well knows, makes a very expensive operation.

At the present time, the plant is only operating at about a third of its capacity and is employing about 250 people. I am told that at full production more than 400 employees would be engaged at the

plant. Full production of the plant is of great importance to the citizens of my State and particularly to the citizens of the Louisville area.

Operation of the plant in the past has been rather spasmodic. From June 1943 to June 1945, from January 1951 to June 1952, and from February 1953 to July 1953 the plant was operated by the Government. The plant has been idle in those periods not covered by the above up until the time that it was put under private operation in October 1955.

The legislation, Mr. Chairman, is patterned closely after laws providing for the disposal of the other rubber-producing facilities and contains provisions for a national security clause and review by the Attorney General of any sale or lease proposal to ascertain whether or not it would violate the antitrust laws.

In addition, the bill would provide for a congressional review of any proposed sale by the Disposal Commission.

I have been advised by the Rubber Commission that the Government still owns some catalyst equipment which is presently located in the plant of the Davison Chemical Corp. at Baltimore, Md. This equipment is suitable only for use in producing a catalyst for the production of alcohol butadiene, and it is the only equipment now in existence which is capable of manufacturing such a catalyst.

For the reason that it is desirable to keep the equipment available for the production of catalyst in connection with both the Kobuta, Pa., operation and the Louisville production, I assure the chairman that I approve of the amendment proposed by Senator Beall making provision for the sale or lease of the catalyst equipment.

Mr. Chairman, for the reasons outlined above, an early and favorable consideration of this legislation would seem to be desirable.

Certainly I recognize from the statement made by the chairman of the subcommittee, and then from the knowledge I have of his desire to see the Government get out of business when it can, that early action will be considered by this subcommittee.

Senator FREAR. Senator, I know the people of Kentucky are very fortunate in having you and your colleague represent them. This is an example of the interest you take in the citizens of Kentucky, and I think it a very worthy one.

The chairman of the subcommittee will act as expeditiously as is within his power, sir.

Senator CLEMENTS. The chairman in the first part of his observation showed his usual generous nature toward the Senators from Kentucky. In the second instance I am not a bit surprised to find the chairman recognizing the need for early action on this matter, and that the committee will give it its very, very prompt attention.

I thank you, Mr. Chairman, for the privilege of coming before the committee this morning, and I know that the Government's investment is in fine hands and will be properly considered by this committee.

Senator FREAR. Thank you very much. It is certainly good to have you here, Senator.

Mr. Harold W. Sheehan, general counsel and acting secretary of the Rubber Producing Facilities Disposal Commission.

Good morning, sir.

Mr. SHEEHAN. Good morning, Senator.

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Senator FREAR. Before you begin, Mr. Sheehan, I should like to introduce into the record the Disposal Commission's letter of February 2, 1956; the lease of the Louisville plant; the protection and maintenance contract covering the Louisville plant; the brochure on the Louisville plant; and the brochure on the catalyst equipment. The letter referred to will be inserted in the record here, and the other documents will be placed in the appendix.

(The letter referred to follows:)

RUBBER PRODUCING FACILITIES DISPOSAL COMMISSION,
Washington 25, D. C., February 2, 1956.

Hon. J. W. FULBRIGHT,
Chairman, Senate Banking and Currency Committee,
Washington, D. C.

DEAR SENATOR FULBRIGHT: We furnish herein our comments on the several questions relating to S. 3091, a bill to amend the Rubber Producing Facilities Disposal Act of 1953, as heretofore amended, so as to permit the disposal thereunder of Plancor Numbered 1207 at Louisville, Ky. as requested by you yesterday at the hearings on the Institute, W. Va. copolymer plant disposal.

Question. Would you give a brief description of the plant in its present status?

Answer: The plant was built in 1942–43 to produce butadiene from alcohol. It includes a powerplant and a pumping station, storage tanks, and other equipment. It consists of 3 lines, each with a capacity of 20,000 short tons of butadiene, although it has produced almost 90,000 tons per year. The plant originally cost about $31 million, but depreciation charges of about $22 million have been made. The plant produced butadiene from the middle of 1943 to the fall of 1945, and again from early 1951 to the middle of 1952 and during the first part of 1953. It was then shut down until last summer when it was leased to Publicker Industries, Inc., which is now producing butadiene from alcohol from one line.

Question: Do you think it would be a good idea to authorize sale or a long-term lease of the Louisville plant?

Answer: This Commission is of the opinion that for both national security and economic reasons it is desirable to have this plant in operation. There is presently a shortage of butadiene, one of the essential ingredients of synthetic rubber, and production from this plant would thus be important in increasing the supply of synthetic rubber. Legislation authorizing a lease with a longer term than the existing lease, and also permitting eventual sale, would accordingly seem appropriate. As respects the possibility of sale, no interest in the purchase of this plant was received in response to the original request for bids in November 1953. So far as the Commission knows, only the present lessee has to date indicated that it would be interested in buying the plant. The Commission believes the possibility of a satisfactory sale to be highly limited. It is the Commission's opinion that a longer-term lease provides a more feasible solution.

Question: As I read S. 3091, it follows the Baytown plan and would authorize the Commission to make the sale or lease. Have you any comments on this?

Answer: S. 3091 follows substantially the procedure employed in the Baytown sale. This worked satisfactorily. Should the Congress decide to follow a similar course with respect to the Louisville alcohol butadiene plant, the Commission suggests that the legislation authorize Federal Facilities Corporation, which has operated the plant and has maintained it in standby, be named as disposal agent. This Corporation is thoroughly familiar with all aspects which would have any bearing on this particular disposal. The Commission believes that it has fulfilled the responsibility for which it was originally established and does not see that the expense of continuing it in existence for this particular matter is justifiable.

Question. I note that the bill authorizes a sale subject to the lease to Publicker. In other words, as I see it, a purchaser other than Publicker would step into the Government's shoes as a landlord for about 2 years and then become owner. Do you think this arrangement would encourage any one but Publicker to bid?

Answer. We believe the existing lease situation would discourage bids from any one but Publicker.

Question. Do you think it would be preferable to amend the bill to require that the plant should not be offered for sale or lease unless Publicker will amend the lease to permit the Government to cancel it on 30 days' notice?

Answer. Publicker has invested substantial sums as lessee and should, of course, be protected on its unrecovered investment in any disposal.

Question. Do I understand there is also some equipment in Maryland designed to manufacture a particular catalyst for use in making butadiene from alcohol?

Answer. The Maryland equipment for the manufacture of the particular catalyst is maintained in standby at the plant of Davison Chemical Co. in Baltimore, Md.

Question. Do I understand that this catalyst will be needed if the Louisville plant continues to operate for long?

Answer. We are informed that this is the only equipment available in this country for the manufacture of the catalyst needed in the production of butadiene from alcohol, and hence the equipment would be essential, not only for the operation of the Louisville plant, but should be kept available for the duration of the national security clause in the sales contract with Koppers Co., Inc., which acquired the Kobuta, Pa., alcohol butadiene plant by purchase in April 1955.

Question. Would it be practical for this bill to be amended to permit sale of the equipment under the same arrangements as were made for tank cars?

Answer. In view of the answer to the foregoing question, it is our conclusion that any sale of the catalyst equipment should include a national-security clause equal in duration to the unexpired term of the national security clause in the Kopper's sales contract, or in any sale or lease agreement affecting the Louisville plant, whichever is greater. The sale of this equipment should otherwise follow the pattern of the tank-car sales.

In view of the time urgency, we have not been able to submit this to the Bureau of the Budget in accordance with the usual procedure.

Sincerely yours,

HOLMAN D. PETTIBONE, *Chairman.*

Seantor FREAR. It is good to have you here, sir.

STATEMENT OF HAROLD W. SHEEHAN, GENERAL COUNSEL AND ACTING SECRETARY, RUBBER PRODUCING FACILITIES DISPOSAL COMMISSION

Mr. SHEEHAN. Thank you very much, Senator.

The position of the Disposal Commission is set forth in the letter you have just inserted in the record.

We have nothing further to add. If there are any questions, I would be very happy to try to answer them.

Senator FREAR. The transfer of the Institute plant—that is, the plant at Institute, W. Va.—to Goodrich-Gulf Chemical, Inc., took place on February 21, 1956, did it not?

Mr. SHEEHAN. That is correct.

Senator FREAR. Mr. Pettibone's letter of February 2 recommends that the Disposal Commission be permitted to go out of existence and that the sale or lease of the Louisville plant and the catalyst equipment be made by the Federal Facilities Corporation. The Federal Facilities Corporation has recommended that the Commission carry out these disposals. Could you tell us whether the Commission would be willing to carry out these functions if the Congress should wish the Commission to make these disposals?

Mr. SHEEHAN. The Commission will do the job to the best of its ability if named in the legislation.

Senator FREAR. They have always done, in my opinion, a very outstanding job in the disposal of these Government-owned units.

Mr. SHEEHAN. Thank you, sir.

Senator FREAR. It has been suggested that S. 3091 be amended by changing the period for negotiations with prospective purchasers

from 45 to 30 days in order to make sure that the congressional review period would have expired before the end of this session. Do you think 30 days would be sufficient time for negotiations?

Mr. SHEEHAN. Yes; we do.

Senator FREAR. It has been suggested that the last sentence of section 9 (f) of the Disposal Act of 1953 should not apply to the disposal or lease of the Louisville plant. It requires that the Attorney General be asked for an opinion 60 days before the effective date of the lease and requires him to reply within 45 days. Will you agree that such a change in section 5 of S. 3091 would be desirable?

Mr. SHEEHAN. Insofar as the elimination of the time is concerned, we would agree, but we would recommend that the Attorney General pass on whatever lease might be involved.

Senator FREAR. Oh, yes.

Is it your view that the catalyst equipment now located in Baltimore cannot be operated under the present law?

Mr. SHEEHAN. That is our opinion.

Senator FREAR. If this bill were enacted, the Disposal Commission would not be required to sell or lease the plant or the equipment unless a satisfactory offer were received. Is that right?

Mr. SHEEHAN. That is correct.

Senator FREAR. I have no further questions, Mr. Sheehan. Unless you have something that you would like to add?

Mr. SHEEHAN. Not a thing.

Senator FREAR. May I thank you for your appearance this morning. We are glad to have you.

Mr. SHEEHAN. Thank you very much.

Senator FREAR. Mr. G. J. Irwin, Director, Office of Synthetic Rubber, Federal Facilities Corporation.

At the beginning of your testimony, Mr. Irwin, may I present for the record the Federal Facilities Corporation's letter of February 14, 1956, the Treasury Department's letter of February 24, 1956, and, third, the Federal Facilities Corporation's letter of March 8, 1956.

(The documents referred to follow:)

FEDERAL FACILITIES CORPORATION,
Washington, D. C., February 14, 1956.

Hon. J. W. FULBRIGHT,
United States Senate,
Washington, D. C.

DEAR SENATOR FULBRIGHT: Mr. Holman D. Pettibone, Chairman of the Rubber Producing Facilities Disposal Commission, has sent me a copy of his letter addressed to you under date of February 2, 1956, commenting on S. 3091 providing for the disposal of the alcohol butadiene plant at Louisville, Ky. In this letter, Mr. Pettibone suggests, on behalf of the Commission, that the Federal Facilities Corporation be named as the disposal agent in place of the Commission.

We have given serious consideration to this suggestion, and although we realize that the Disposal Commission has been continued in existence for a much longer time than contemplated under the original legislation and in all justice should be relieved of its responsibilities at as early a date as possible, we feel nevertheless that the Commission is the proper agency of the Government to deal with the disposal of this plant. The procedures of the Commission in the reception of bids, negotiations with the bidders and all the other elements of a disposal program have been so well established, and the Commission and its staff have acquired such invaluable experience, that it would seem to be clearly in the best interest of the Government to ask them to continue their labors in order to dispose of the one remaining plant rather than to ask another Government agency to start from scratch and set up the organization and machinery which would be required.

The report on S. 3091 requested in your letter dated February 1, 1956, will be submitted at an early date but at this time I am taking the liberty, after discussing the matter with the Secretary of the Treasury, to send these comments to you with the strong recommendation that no change be made in S. 3091 with respect to the agency designated to handle the disposal of the Louisville plant.

Sincerely yours,

LAURENCE B. ROBBINS,
Administrator.

TREASURY DEPARTMENT, *February 24, 1956.*

Hon. J. W. FULBRIGHT,
Chairman, Committee on Banking and Currency,
United States Senate, Washington, D. C.

MY DEAR MR. CHAIRMAN: This is in response to your letter dated February 1, 1956, requesting views regarding S. 3091, to amend the Rubber Producing Facilities Disposal Act of 1953, as heretofore amended, so as to permit the disposal thereunder of Plancor No. 1207 at Louisville, Ky. If enacted, the bill would enable the Rubber Producing Facilities Disposal Commission to negotiate again for the sale of the alcohol butadiene plant at Louisville, Ky.

In view of the present great demand for rubber and especially in view of the recent sale of the plant at Institute, W. Va., disposal of the Louisville plant would promote both the economic and national defense interests of the Nation and this Department, therefore, favors the objectives of this bill. The bill apparently recognizes that the Louisville plant is presently under lease until April 4, 1958, subject to termination only in the event of certain specified contingencies.

The committee may also wish to consider the advisability of including in the bill authority to sell or lease certain catalyst producing equipment which is Government owned and which is presently located in the plant of Davison Chemical Co. at Baltimore.

The Department has been advised by the Bureau of the Budget that there is no objection to the submission of this report to your committee.

Very truly yours,

W. RANDOLPH BURGESS,
Acting Secretary of the Treasury.

FEDERAL FACILITIES CORP.,
Washington 25, D. C., March 8, 1956.

Mr. ROBERT A. WALLACE,
Staff Director, Senate Banking and Currency Committee,
Senate Office Building, Washington, D. C.

DEAR MR. WALLACE: When the two alcohol butadiene plants were constructed for operation by Carbide & Carbon Chemicals Corp., at Institute, W. Va., and Louisville, Ky., facilities were installed for the manufacture of silica gel tintala. The plant at Institute was sold by War Assets Administration to Carbide in 1947, and that sale included the catalyst-producing equipment located there. The plant at Louisville was shut down and its catalyst-producing equipment was dismantled and stored.

When it became necessary to reactivate the Louisville plant in 1950, additional catalyst had to be manufactured for use in that plant and the one operated by Koppers at Kobuta, Pa. Carbide did not wish to assume the reconstruction and operation of the catalyst-producing equipment; therefore, since Davison Chemical Co. had supplied the raw materials for the catalyst, they were approached to determine if they would enter into a contract to produce catalyst for Carbide and Koppers. They evidenced a willingness to perform such operation and, therefore, it was decided to transfer the catalyst equipment from Louisville to the Davison plant and reinstall it.

A supply of catalyst was made for the two plants, and operations were discontinued in August of 1952. Since that time the equipment at Davison has been in standby at a net cost to the Government of $5,962 to date.

Due to the particular nature of the equipment, it is usable only for the manufacture of silica gel tintala catalyst for use in the production of butadiene from alcohol. To my knowledge, there is no other plant in the United States equipped to manufacture that type of catalyst. Under the existing circumstances, consideration should be given to selling or leasing it.

Portions of the equipment could be dismantled and sold individually at perhaps a very small return to the Government. Probably the greatest return could be realized through sale for use for which the equipment was originally designed.

The brochure M–2, published by the Rubber Producing Facilities Disposal Commission, lists the cost of the equipment and each individual piece of equipment.

Sincerely yours,

(Signed) G. J. Irwin,
G. J. IRWIN,
Director, Office of Synthetic Rubber.

Senator FREAR. Do you have a prepared statement, or would you like to make a statement, Mr. Irwin?

STATEMENT OF G. J. IRWIN, DIRECTOR, OFFICE OF SYNTHETIC RUBBER, FEDERAL FACILITIES CORPORATION

Mr. IRWIN. Our letters have been presented for the record.

Senator FREAR. Yes. As I understand it, the Louisville plant produces butadiene from alcohol. I also understand the plant has three lines, each with a rated capacity of 20,000 short tons and an actual capacity of about 30,000 short tons. Is that right?

Mr. IRWIN. That is correct.

Senator FREAR. As I understand it, the maintenance cost of the Louisville plant when in standby condition is about $300,000 a year. Is that correct?

Mr. IRWIN. That is approximately correct; yes.

Senator FREAR. One line is now running. Is that also correct?

Mr. IRWIN. That is right.

Senator FREAR. What is the approximate maintenance cost at the present time, based on two lines being idle?

Mr. IRWIN. About $8,000 per month per line—$16,000 per month for the 2 lines which are now idle.

Senator FREAR. Some of this may be a duplication of the statement of Senator Clements.

How much are you receiving or being credited with for the line which is now operating?

Mr. IRWIN. That depends entirely upon the production. Of course, they have had ups and downs in production, so, therefore, the return that the Government is receiving now is not typical of what it would be if they were running at 90 tons per day. Ninety tons a day, of course, would be $540 per day.

We have received somewhere in the neighborhood of $50,000 to $60,000 return to date.

Senator FREAR. For what period.?

Mr. IRWIN. Beginning in October. The plant went into operation in October.

Senator FREAR. Are there any plans under-way to open a second line?

Mr. IRWIN. That I cannot answer. That information could be obtained from the lessee.

Senator FREAR. Suppose a second line were opened. How would that make you stand financially?

Mr. IRWIN. That would double the return.

Senator FREAR. Double the return?

Mr. IRWIN. Yes, and reduce the maintenance cost by $8,000 a month.

Senator FREAR. The income would still be based on the output?

Mr. IRWIN. Right.

Senator FREAR. I have an article from Chemical Week for January 28, 1956, which indicates that butadiene is quite scarce at the present time.

I ask that this article be made a part of the record at this time.

(The article referred to follows:)

[Chemical Week, January 28, 1956]

MARKETS

Company	Location	Expansion (short tons)	Due in—
By 1957, these butadiene expansions:			
Firestone Rubber	Lake Charles, La.[1]	40,000	1957.
General Tire-El Paso Natural Gas	Odessa, Tex.	30,000	1957.
Petroleum Chemicals	Lake Charles, La.	16,000	Fall, 1956.
Petro-Tex Chemical	Houston, Tex.	45,000	End of 1956.
Phillips Chemical	Borger, Tex.	25,000	Late 1956.
Texas Butadiene & Chemical	Houston, Tex.	43,000	Early 1957.
And possibly this alcohol-butadiene addition:			
Publicker	Louisville, Ky.[2]	60,000	1956 or 1957.

[1] Likely site.
[2] Plant leased from U. S. Government.

Could boost total United States production to some 925,000 short tons per year.

POSER: WILL THERE BE ENOUGH BUTADIENE?

Perhaps the most significant developments due to unfold in the chemical process industries during the next year or two will carry a synthetic rubber connotation. And, undoubtedly, greater availability of the prime GR–S raw material, butadiene, will emerge as the biggest attention-getter.

Actually, butadiene capacity (petroleum-based) in this country—after a long-time immutability under Government ownership—will expand by nearly 200,000 tons before the close of 1957. And there's a more than slim chance that the alcohol-butadiene plant Publicker leases from the Government at Louisville, Ky., will have 2 additional units running—an added 60,000 tons per year.

Word last month (CW Market Newsletter, December 17, 1955) that Publicker had started up one of the three 30,000-tons-per-year units—and had firm commitments for the entire 1956 output—clearly indicates the prevailing tight market position on butadiene. Reason: cost of the alcohol-derived material runs higher than that from petroleum, and only scarcity of the latter would induce strapped consumers to seek the former.

Other recent fast-breaking news heavily underscoring the current—and anticipated—butadiene need includes:

Goodrich-Gulf Chemical's successful bid on the Government's idle 122,000-long-tons-per-year GR–S plant at Institute, W. Va. (When the plant is producing at full rate, it may require some 100,000 tons per year of butadiene.)

General Tire & Rubber and El Paso Natural Gas tieup to build the first post-war privately financed and completely integrated rubber-making outfit at Odessa, Tex. The complex will include installations to produce butadiene (30,000–35,000 tons per year) and styrene, as well as a 40,000-ton copolymer plant to turn out a "new" type of GR–S.

Texas Butadiene & Chemical, formed in mid-1954, now apparently has licked all its finance problems (CW Business Newsletter, July 10, 1954) and is going ahead with a proposed $26-million plant at Houston, Tex.[1]

Although Texas Butadiene & Chemical will produce two major end-products, alkylate (for aviation gasoline) and butadiene, the latter's prospects of future demand—for synthetic rubber and other petrochemicals—were actually the chief inducement for the Houston installation. Output of the plant can be varied;

[1] Privately built butadiene facilities now in existence total about 55,000-tons-per-year capacity: Esso (Baton Rouge, La.); Dow (Midland, Mich.); Union Carbide (South Charleston, W. Va.; Seadrift, Tex.; Texas City, Tex.).

initially the annual ratio will be some 17,000 tons of butadiene to about 2.5 million gallons of avgas. If avgas production is throttled down to zero, butadiene potential, by the end of this year or early next, will be 43,000 tons.

This, however, is reportedly only the first part of a two-phase construction program. When all facilities are installed, plant capacity will be geared, basically, to turn out an impressive 86,000 tons per year of butadiene.

That expansion and those listed above are by no means all the new butadiene construction now being seriously considered by eyes-on-the-future petrochemical and rubber makers. For instance, take the Texas-United States Chemical and Goodrich-Gulf combination (Neches Butane Products). Oft-repeated trade talk has it that the Port Neches, Tex., plant, currently the biggest United States butadiene producer (almost 200,000 tons per year) will likely be expanded—and in the not too distant future.

And it's fairly certain that National Petro-Chemicals (owned by National Distillers and Panhandle Eastern) will put up a butadiene plant to furnish a necessary ingredient for United States industrial's new $10-million isosebasic acid operation at Tuscola, Ill. (CW, December 10, 1955, p. 60).

Such strictly chemical uses for butadiene are relatively small now, of course, stacked up against the near-90-percent of total production going into GR–S rubber, which means that the latter, for sometime to come, will continue to crash more frequently into chemical news pages.

Demothballing Soon:—The excitement generated last month when Washington revealed that Goodrich-Gulf Chemicals had submitted the top bid [3] ($11 million) for the sprawling Institute plant, was just a mild flurry compared with the ruckus now stirring (CW, January 21, p. 15). Fact is, there's still some doubt whether or not Goodrich-Gulf will get a chance to operate the plant despite the Justice Department's O. K. on the deal.

Some Congressmen continue to raise the point that the sale, if allowed to go through, gives one company "control" over too great a percentage of total United States synthetic rubber capacity.

At any rate, if synthetic rubber consumption predictions are to be fulfilled, the Institute output will be a significant factor; and chances are Goodrich-Gulf will be the company looking for additional essential butadiene. As mentioned, the plant will eventually need about 100,000 tons per year of the raw material—a quantity just about too much for presently available butadiene production to cover.

One more-than-likely source of part of Institute's butadiene requirement is Publicker's 3-year-leased plant. There's nothing official on it yet, but output from 1 of the 2 now-idle 300,000-tons per year butadiene units will probably funnel to Goodrich-Gulf.

Another strong possibility: Publicker may also reactivate the third unit—bringing production to a near-90,000-tons per year total. Because of the costs involved, however, Publicker is understandably reluctant to take on added business without firm year-long—or longer—commitments, an indication that the company realistically appaises the impact that less expensive petro-derived butadiene will have on its alcohol-based material's market. The fermentation alcohol colossus could well be badly caught if the upcoming expansions prove more than ample to cover butadiene demand, or if demand itself should suddenly peter out.

Consensus in the trade, however, is that neither eventuality is likely. Synthetic rubber consumption is expected to keep soaring—and that prediction is now bolstered by General Motor's optimistic belief that automobile production (and concomitant need for tires) will remain high.

On the basis of already announced GR–S expansions, United States capacity, by the end of this year, will top a million long tons per year; by 1957, check out at some 1.3 million. By 1960, GR–S, plus other growing special-purpose synthetics, will nudge overall manmade rubber capacity to well over 1.5 million long tons.

Nonrubber uses too.—Butadiene requirements for nonrubber outlets are also slated to increase, though perhaps not as dramatically or as soon as GR–S or nitrile rubber. (The latter, incidentally, now takes only about 4 percent of the available butadiene.) Nylon, latex paints, and resins combined consume perhaps 6 to 7 percent of the something less than 650,000 tons of butadiene made annually, and growth outlook for all three is bright.

Too, with a freer future supply, trade experts expect that big new butadiene uses will be uncovered.

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[3] The five other bidders: Goodyear Synthetic Rubber; Union Carbide & Carbon; Imperial Commodities; United Rubber & Chemical; Edwin A. Pauley.

But present—and soon-due—butadiene makers aren't straining too hard to look for new outlets. Not with the escalator developments definitely on the way this year and next for its major market—synthetic rubber.

Senator FREAR. Mr. Irwin, is it your understanding that butadiene is now in short supply?

Mr. IRWIN. Butadiene is now in short supply; yes.

Senator FREAR. As I understand, the equipment at Baltimore is now set up on land leased from the Davison Chemical Co. Is that right?

Mr. IRWIN. Right.

Senator FREAR. When does this lease expire?

Mr. IRWIN. I believe it is June 30 of this year.

Senator FREAR. What costs are involved?

Mr. IRWIN. It is a very, very nominal cost. The Government has a net cost in that plant of about $5,900 since August 1952.

Senator FREAR. Do I understand that this equipment is used to impregnate silica gel with tantalum oxide?

Mr. IRWIN. Yes.

Senator FREAR. In order to make a catalyst for use in making butadiene from alcohol? Is that right?

Mr. IRWIN. Correct.

Senator FREAR. Is this the only use for this equipment, at least for the specialized part?

Mr. IRWIN. Yes.

Senator FREAR. It is the only use?

Mr. IRWIN. Yes.

Senator FREAR. Is this product used only in making alcohol butadiene?

Mr. IRWIN. Correct.

Senator FREAR. Is there any other equipment available to make this catalyst other than the equipment now stored in Baltimore?

Mr. IRWIN. There is no other equipment installed that could be used for that purpose.

Senator FREAR. Does the Federal Facilities Corporation have any inventory of this catalyst, and if so, what would it be, a few months' supply or a year's or what?

Mr. IRWIN. I think the amount we have on hand probably would carry the operation at Louisville through probably about July.

Senator FREAR. Of this year?

Mr. IRWIN. Of this year.

Senator FREAR. Would it be desirable to keep this equipment—at least the specialized equipment—available, either in the Government's hands or in private hands subject to a national-security clause, as long as the alcohol butadiene plants at Kobuta and Louisville are available to make alcohol butadiene under national-security clauses?

Mr. IRWIN. The equipment should be available for production of catalysts for alcohol butadiene.

Senator FREAR. Is it your understanding, as Mr. Sheehan previously testified, that this equipment cannot be operated under the present law?

Mr. IRWIN. Well, it is the lawyers' opinion. They have to interpret the act.

Senator FREAR. You concur, Mr. Irwin?

Mr. IRWIN. I do, yes.

Senator FREAR. Senator Capehart?

Senator CAPEHART. I have before me a statement that I presume the chairman put into the record. It says:

> At the present time, because of the substantial demand for synthetic rubber, there is a shortgage of butadiene. Consequently, even at the higher price, alcohol butadiene can readily be sold.

Is there a shortage of butadiene at the moment?

Mr. IRWIN. There is, Senator; yes.

Senator CAPEHART. Why?

Mr. IRWIN. Because of the increased production of synthetic rubber. Some of the plants have greatly increased their——

Senator CAPEHART. You mean the petroleum is not available?

Mr. IRWIN. There is not sufficient petroleum butadiene to supply all the production which is required.

Senator CAPEHART. What does the shortage amount to?

Mr. IRWIN. I cannot tell you that.

Senator CAPEHART. What?

Mr. IRWIN. I cannot answer that question; I am sorry.

Senator CAPEHART. Is it serious?

Mr. IRWIN. It is serious with respect to the operation of the Institute plant.

Senator CAPEHART. Would the Institute plant be able to operate successfully on other than butadiene made in Louisville?

Mr. IRWIN. I think it would be in very short supply.

Senator CAPEHART. What kind of grain does this Louisville plant use?

Mr. IRWIN. I cannot answer that.

Senator CAPEHART. You do not know?

Mr. IRWIN. No. I understand that the alcohol comes from imported molasses.

Senator CAPEHART. You understand that?

Mr. IRWIN. Yes.

Senator CAPEHART. Don't you know that to be a fact?

Mr. IRWIN. No, I do not know it to be a fact.

Senator CAPEHART. What is your position?

Mr. IRWIN. I am Director of the Office of Synthetic Rubber, Federal Facilities.

Senator CAPEHART. Well, you know it to be a fact, do you not, that this Louisville plant does not use any grain at all at the moment, that it is using all alcohol——

Mr. IRWIN. It does not use domestic grain.

Senator CAPEHART. It is using alcohol that is imported from Cuba?

Mr. IRWIN. I do not know the source.

Senator CAPEHART. Well, is there anyone here who does know?

Senator FREAR. Mr. Brown is here from Publicker Industries.

Senator CAPEHART. Where does the molasses come from?

STATEMENT OF LAWRENCE R. BROWN, PUBLICKER INDUSTRIES, INC., PHILADELPHIA, PA.

Mr. BROWN. The molasses comes from Cuba. The alcohol is manufactured in the United States from Cuban molasses.

Senator CAPEHART. We import the molasses from Cuba to Louisville and make it into butadiene?

Mr. BROWN. No, sir. We import the molasses to New Orleans where they have alcohol plants.

Senator CAPEHART. Why don't you come up here, Mr. Brown?

Senator FREAR. He is the next witness.

Mr. BROWN. Do you want me to wait, Senator?

Senator FREAR. If I may suggest, complete your questions if you can to Mr. Irwin, because Mr. Brown is the next witness, if that would not interfere——

Senator CAPEHART. I rather wanted them both together.

Senator FREAR. If there are no objections, Mr. Brown, come up and have a seat. I believe you have already been identified as Mr. Laurence R. Brown of Publicker Industries of Philadelphia.

Senator CAPEHART. You are making now butadiene out of molasses; are you not?

Mr. BROWN. No, sir. The Louisville plant makes butadiene out of alcohol. It makes no difference where the alcohol comes from. Any alcohol of technical grade.

Senator CAPEHART. In other words, you send the alcohol to Louisville?

Mr. BROWN. Yes, sir.

Senator CAPEHART. Which is made in your other plants?

Mr. BROWN. Yes, sir, and in addition we also make butadiene from other people's alcohol the source of which we do not actually know. We have a contract with Shell. We make butadiene out of their alcohol at Louisville, and we assume that the alcohol they give us is made synthetically in Texas in their synthetic alcohol plant.

Senator CAPEHART. Is it your understanding that all the alcohol used in making the butadiene at the moment in Louisville is made out of molasses?

Mr. BROWN. No, sir. Our own is. All the alcohol that we use for our own account is made out of molasses, but in the case of the alcohol that we process for Shell we do not actually know where it comes from but we assume that it is made——

Senator CAPEHART. It is not petroleum?

Mr. BROWN. We assume it is petroleum alcohol since Shell is a petroleum alcohol producer.

Senator CAPEHART. I see. Where does Shell make the alcohol you buy?

Mr. BROWN. We assume they make it in Texas.

Senator CAPEHART. They make it in Texas, ship it up to Louisville?

Mr. BROWN. Yes, sir. They ship it up by barge. We have never asked them where they get it. It is not our business. Our contract is with them to convert their alcohol. But, as I say, we assume it is petroleum alcohol.

Senator CAPEHART. What percentage of the synthetic rubber at the moment is being made out of butadiene made with alcohol? Do you know?

Mr. BROWN. Let's see. That would take a little figuring. We are producing at a rate, we'll say, of 30,000 tons a year, and the total petroleum butadiene is about 800,000 tons, is it not, Mr. Irwin?

Mr. IRWIN. Yes.

Senator CAPEHART. Are you the only people furnishing butadiene made out of alcohol?

Mr. BROWN. Yes, sir.

Senator CAPEHART. And you furnish about 30,000 tons a year?

Mr. BROWN. Out of 800,000 tons.

Senator CAPEHART. About 30,000 tons a year?

Mr. BROWN. Yes, at the present time. We hope to expand that.

Senator CAPEHART. And of the total of 30,000 tons, about what percentage is made of out molasses?

Mr. BROWN. About 80 percent.

Senator CAPEHART. And the other 20 percent then would come from Shell, made out of petroleum?

Mr. BROWN. Yes. I assume, sir, it is made out of petroleum. I cannot actually testify to that.

Senator CAPEHART. You have a lease on this plant, do you not, at Louisville?

Mr. BROWN. Yes, sir.

Senator CAPEHART. I notice this bill, Mr. Chairman, calls for either lease or sale.

Senator FREAR. Yes.

Senator CAPEHART. Have we had any testimony as to why we would want to lease it?

Senator FREAR. Because we have not had an offer to buy it, I understand. However, I think Mr. Irwin or Mr. Sheehan can better answer that question.

Senator CAPEHART. Do you know why this bill reads "lease or sale"?

Mr. IRWIN. No; I do not.

Senator CAPEHART. I mean all the other synthetic plants, as you know——

Mr. IRWIN. Were outright sales; yes.

Senator CAPEHART. I wonder why this one is worded "lease or sale."

Mr. BROWN. I think, sir, because the original Rubber Disposal Act in 1953 and 1954 provided for the lease of the alcohol butadiene facilities if they could not be sold, and this bill follows the same pattern. Sale comes first, but if a sale cannot be made the Commission is authorized to lease.

Senator CAPEHART. What act is that that said they could either be leased or sold?

Mr. BROWN. The original Disposal Act.

Senator CAPEHART. Which one are you talking about?

Mr. BROWN. The first one.

Mr. IRWIN. The Disposal Act of 1953.

Senator CAPEHART. That said "lease or sale"?

Mr. BROWN. What it provided, sir, was that if the alcohol butadiene plants were not sold, if no good offer were received, the Commission was authorized to lease them. This applied only to the alcohol plants. Not to the other rubber facilities. And this bill follows exactly the same pattern.

Mr. IRWIN. They could not be leased for more than 3 years.

Senator CAPEHART. Your Publicker contract expires in 1958?

Mr. BROWN. Yes, sir.

Senator CAPEHART. Do you want to release this plant?

Mr. BROWN. To release it?

Senator CAPEHART. Do you want to lease it again?

Mr. BROWN. Yes, we would like to buy it if we can negotiate a favorable contract; otherwise we would like to extend our lease.

Senator CAPEHART. It is a profitable plant?

Mr. BROWN. We hope it will be, sir. So far it has cost——

Senator CAPEHART. It may be profitable?

Mr. BROWN. So far it has cost us a lot of money, as we figured for anything getting started. This is the first attempt to make private alcohol butadiene. It has never been done. In a way we are pioneers. These plants were built and run by the Government during the war solely as emergency plants.

Senator CAPEHART. Are you the largest producers of alcohol in the United States?

Mr. BROWN. No, sir, I do not think we are. We have the largest fermentation capacity in the United States, but we do not use it all the time, unfortunately.

Senator CAPEHART. Is all your alcohol made out of molasses?

Mr. BROWN. Yes, sir. We can make it out of grain. We have facilities. But as a commercial reality the only thing we can afford to make it out of is molasses.

Senator CAPEHART. And you import all the molasses from Cuba?

Mr. BROWN. Yes, sir.

Senator CAPEHART. Is that a free tariff?

Mr. BROWN. No, sir, there is a duty.

Senator CAPEHART. There is a small duty?

Mr. BROWN. There is a small duty on it.

Senator BEALL. Mr. Chairman, I am sorry I am late this morning, but I wonder if you would ask these gentlemen about my amendment to S. 3091, whether they object to it or what their opinion is?

Senator FREAR. The testimony thus far, Senator, has been that they would like it to be a part of S. 3091.

Mr. Brown has not been asked that question, and neither has Mr. Irwin, I do not think I asked that question.

Mr. IRWIN. No, I do not think you did, but the letter which has been made part of the record contains a statement that we recommend that consideration be given to that.

Senator BEALL. Mr. Chairman, the attorney just showed me the letter from the Federal Facilities Corporation. Is that letter going to be made part of the record?

Senator FREAR. That is right.

Do you have further questions for Mr. Irwin, Senator?

Senator CAPEHART. We are going to sell this plant under the same terms and conditions of the original Disposal Act, are we not? Either lease it or sell it?

Mr. IRWIN. Yes.

Senator CAPEHART. If we lease it, why do we need new legislation?

Mr. IRWIN. Because the original act provided for a 3-year period.

Senator CAPEHART. The original act?

Mr. IRWIN. Yes.

Senator CAPEHART. Then we could just pass a very simple act here extending the existing lease; could we not?

Mr. IRWIN. I presume you could.

Senator FREAR. Then, of course, you could not sell it.

Mr. IRWIN. We could not sell it then, no.

Senator CAPEHART. This lease expires when?

Mr. BROWN. April of 1958.

Senator CAPEHART. April of 1958?

Mr. IRWIN. Yes.

Senator CAPEHART. Why are we hurrying the matter then?

Senator FREAR. The Disposal Commission expires, you know, sir, about the 22d of this month. This is to meet that deadline, Senator, as I understand it.

Mr. BROWN. Well, the reason, sir, that we feel that a longer term lease should be provided for at this time if the plant is not sold is that under a short-term lease we cannot afford to make the capital improvements that the plant needs.

Senator CAPEHART. Are you prepared as Publicker, if somebody comes along, if we pass this bill, who is willing to pay more money than you are for this plant, to cancel your lease that has 2 years yet to run?

Mr. BROWN. Not offhand just to cancel it, sir. Our view is this: We have an investment in the plant which we have made in the leasehold. It is our view that if somebody else makes an offer to the Commission to buy the plant as is, conditioning their offer on our getting out, which would be rather curious, because I do not know what they would use to run the plant with—but never mind that; assume they make it that way, then there would develop a three-cornered negotiation between ourselves, the would-be buyer, and the Commission.

Senator CAPEHART. Does this bill, if we pass it, automatically cancel your existing lease?

Mr. BROWN. No, sir, it does not.

Senator CAPEHART. Then what authority does the Government have either to lease it or sell it prior to 1958?

Mr. BROWN. The way the bill reads, sir, the Commission can sell it subject to the present lease, or, if the Commission negotiates a termination of our lease at the same time that they negotiate the sale to somebody else, the Commission then is in a position to give possession immediately.

Senator CAPEHART. Would it not be more simple to extend the life of the Disposal Commission and dispose of this when your lease expires than to do it now this way?

Mr. BROWN. Well, that seems rather hard on the Commission to keep them that long in business. But it does not solve the key industrial problem, sir, which is that we should have——

Senator CAPEHART. There are other governmental agencies besides the one for disposal of rubber that have been successful, too.

Mr. BROWN. Yes.

Senator CAPEHART. Could we not transfer this to some other agency and when your lease expires offer it for sale or make a new lease?

Mr. BROWN. That——

Senator CAPEHART. I do not quite understand.

Mr. BROWN. Well, the trouble with that, sir, is simply this: We stand today faced with the termination of the lease in April of 1958. That is 2 years more. We are utterly unable to make capital investments in the plant. We could get, we figure, about a 30-percent increase in capacity in that plant with some changes. You see, it was always an emergency standby plant. After the war, it was just kept to make butadiene in a crisis. Naturally enough, the Government never invested anything in the plant beyond just enough to keep it in standby available for emergency. The Government did not have the necessity of a commercially profitable operation. We do.

Therefore, we are faced with the necessity of making some changes in the plant if it is to be profitable, and one of the big changes is to make it capable of greater production. We cannot possibly afford to do that with only a 2-year lease.

Senator CAPEHART. What I am trying to get at is this: I do not see any possibility of getting any other bidders in here other than you. You hold the lease. I certainly wouldn't want to buy it subject to your lease if I were a prospective purchaser.

Mr. BROWN. Well, it is valuable leasehold.

Senator CAPEHART. It seems to me we are doing business with you and you alone.

Mr. BROWN. There is nothing, sir, that would stop somebody making a bid to the Commission subject to their negotiating our lease out of the way, and if it was an attractive offer and we took a stubborn position, we certainly would look very ridiculous.

Senator CAPEHART. I just cannot conceive of us passing legislation here—I do not believe I can, but maybe I do not understand it at the moment—to sell or lease something that we have no right to sell for at least 2 years.

Mr. BROWN. No, sir; there is nothing to prevent the Government selling the plant subject to the lease. That happens every day.

Senator CAPEHART. I understand that.

Mr. BROWN. There might very well be a buyer who did not want possession until the expiration of the lease. If somebody bought the plant to run today, they would have to have alcohol, and I do not know where they would get alcohol unless they picked up our contracts. They might, therefore, just as well say, "All right, you stay in as the tenant while we get our alcohol together." Because there is not any surplus alcohol in the country to run the plant with.

If somebody other than ourselves bought the plant, they would either have to buy alcohol from us to run it or else they would have to shut it down.

Senator CAPEHART. Is there a shortage of alcohol in the United States?

Mr. BROWN. There is no shortage, sir, but there is no surplus to run this plant with.

Senator CAPEHART. I was under the impression there were a lot of alcohol plants in the United States that were not running at nearly capacity.

Mr. BROWN. No, sir; that is not so.

Senator CAPEHART. That is not true?

Mr. BROWN. There are lots of grain plants in the United States that are not running, but they could not compete commercially. As far as industrial plants are concerned, all except our own facilities I believe are running pretty nearly to capacity. We have excess capacity which we intend to put into service for the Louisville plant. But I do not believe anybody else has any.

Senator FREAR. Is it not true as it now stands, providing the Government would want to sell this plant, that they would have to negotiate with you on the investment that you have already put in the plant?

Mr. BROWN. Only, sir, if they wished to give immediate possession to someone else. Under this bill the Government could sell the plant to anybody, with possession to be given at the expiration of the lease.

Senator CAPEHART. You have made a lot of improvements in the plant?

Mr. BROWN. Not yet, sir, we have not. We have made some fairly minor ones, but we hope to make some major ones if we are able to capitalize them.

Senator CAPEHART. You mean afford to buy it? That is if you buy it?

Mr. BROWN. No; if we have longer than 2 years to capitalize them in. We cannot amortize heavy investments in 2 years.

Senator CAPEHART. This is a rather odd situation. We are passing legislation for the Government to do something it has no right to do for 2 years.

Mr. BROWN. I'm sorry, Senator, I cannot agree with you. The Government has a right.

Senator CAPEHART. To sell it subject to your lease.

Mr. BROWN. Or to negotiate with us to get out. This is not an auction, sir. The bill provides that a buyer will negotiate with the Commission as all of these sales have been negotiated. I do not see anything to prevent the Commission conducting a 3-cornered instead of a 2-cornered negotiation. They negotiate with "A" to take possession of the plant and they negotiate with us to give it up.

Senator CAPEHART. But you sit there with a gun in your hand because you do not have to give it up until 1958.

Mr. BROWN. Pardon me, sir, we do not sit there with a gun in our hand.

Senator CAPEHART. What is it?

Mr. BROWN. Because the only value of that plant to us is a long-term possession. There is no value in holding it 2 years.

Senator CAPEHART. How much rent do you pay?

Mr. BROWN. We pay $6 a ton. It depends how much we make. There is a guaranteed minimum, a small minimum.

Senator CAPEHART. That has been running I think you testified at about $60,000 a year?

Mr. IRWIN. Yes.

Mr. BROWN. We hope to get three lines running and make very substantial rental payments. We have orders for butadiene that will allow us to do it if we can get ourselves legislatively straightened out and get going.

There is a market for the entire output of that plant.

Senator CAPEHART. What do you sell butadiene for a ton? Do you sell it by the ton?

Mr. BROWN. Yes, sir; or pound.

Senator CAPEHART. What do you sell it for a pound?

Mr. BROWN. The price?

Senator CAPEHART. Yes, sir.

Mr. BROWN. Well, we have sold some at 15 cents and we have sold some as high as 17½ cents. It has varied in between those ranges. We are higher than the petroleum people.

Senator CAPEHART. Most of it goes to Institute, does it not?

Mr. BROWN. No, sir; we have not shipped anything to Institute.

Senator CAPEHART. Where do you ship it to primarily?

Mr. BROWN. We ship some to our neighbor, American Synthetic Rubber. We ship some to Firestone, which we generally trade with Standard Oil Company of New Jersey. That is just to save freight.

We sell some to Canada. We ship some to Shell which we make for them. The butadiene is not ours. I think they ship it up to Akron, but it is their customer, not ours. We just process their alcohol for them.

Senator CAPEHART. Well, this sale or lease will have to come back to the Congress just as the others did under the original Disposal Act?

Mr. IRWIN. Yes.

Senator CAPEHART. And be subject to approval or disapproval?

Mr. IRWIN. Yes.

Mr. BROWN. If there is a sale, I believe it will, sir, but if it is leased, no. It follows the original law again.

Senator CAPEHART. If it is a lease, it will not have to come back again?

Mr. BROWN. That is correct.

Senator FREAR. Is that the way it was in the original law?

Mr. BROWN. That is the way it was in the original statute.

Senator CAPEHART. I think that is all I have, Mr. Chairman.

Senator FREAR. I believe, Mr. Brown, you have answered perhaps some of these questions that we wanted in the record anyhow upon questioning by the Senator from Indiana. Do you need catalyst produced in the equipment at Baltimore?

Mr. BROWN. Yes, sir; we will. We do not need it at the moment, but for continuing operation we will need it.

Senator FREAR. If you get it, shortly thereafter you will need it?

Mr. BROWN. We will need it in about a year, something like that. Maybe a little less. Maybe less. I do not know. It depends on whether we run more lines.

Senator FREAR. Mr. Brown, do you have any statement you would like to make? Although you have been answering questions, would you like to make a statement on behalf of Publicker Industries?

Mr. BROWN. Well, I think, Mr. Chairman, that I really have said what I think about the matter already, and it would just use up your time needlessly to repeat it. In my conversation with the Senator from Indiana I think I stated our position pretty clearly, that we feel that the plant can be sold under this law either subject to the lease or subject to its cancellation by negotiation, and since these are not auctions but negotiations, that we are in no more favorable position than anybody else.

Senator FREAR. Well, thank you, Mr. Irwin and also Mr. Brown. We appreciate your appearance here this morning.

I understand from Senator Beall that he has no other questions.

Senator BEALL. No other questions.

Senator FREAR. I believe Senator Beall, however, does have some interested constituents from the great Free State, and I would like to give him the opportunity of making a statement.

Senator BEALL. Thank you, Mr. Chairman.

Mr. Chairman, as I understand it, our amendment has not been objected to, and, being a salesman, after I get the order I am very happy to go on and say no more. However, I would like the record to show that Mr. A. W. Hemphill, production manager of Davison Chemical Co., and Mr. Howard Spering and Mr. Raymond S. Clark, counsel for Davison Chemical Co., are present, and if you or Senator Capehart want to ask them any questions, they are here.

Gentlemen, will you stand, please?

Senator CAPEHART. Why don't you gentlemen come up here and give us a little education in your kind of business? How do you gentlemen get into this picture?

STATEMENT OF A. W. HEMPHILL, PRODUCTION MANAGER, HOWARD SPERING AND RAYMOND S. CLARK, COUNSEL, DAVISON CHEMICAL CO., BALTIMORE, MD.

Mr. HEMPHILL. We manufacture the catalyst for the butadiene conversion.

Mr. CLARK. The Government——

Senator CAPEHART. Does the Government own your facilities?

Mr. CLARK. Yes, sir. They lease the property at our Curtis Bay plant, and they pay us I think it is $180.20 a month for the space, and the equipment is stored there.

Mr. HEMPHILL. As a matter of interest, the equipment at the Davison Chemical Co.'s Curtis Bay works is in standby operating condition maintained by the Government.

Senator FREAR. Is my understanding of this correct, that Davison is a large operator and has a large number of facilities there and the equipment we are speaking of is only a small part of the plant?

Mr. HEMPHILL. That is correct. It is a small compilation of equipment expressly for the manufacture of this catalyst.

Senator FREAR. For no other purpose?

Mr. HEMPHILL. For no other purpose. It is isolated, under lock and key. It is not used for anything else.

Senator FREAR. As you have just said, I believe, it is in good standby condition ready to be called upon?

Mr. HEMPHILL. That is correct. We consider it in standby condition, although it would take a period of time to restore it to actual operating condition.

Senator FREAR. As we understood, you probably heard the testimony of Mr. Brown, if their lease is extended, and they can go on, they would need the use of that equipment in approximately a year.

Mr. HEMPHILL. I understood him to say that.

Senator BEALL. Mr. Chairman, as I understand it, this catalyst that they manufacture there is necessary for butadiene, and this is the only place where that catalyst is manufactured. Is that right?

Mr. HEMPHILL. That is correct. It is our understanding that this is the only catalyst-manufacturing equipment presently available.

Senator BEALL. Then it is necessary for the manufacture of butadiene?

Mr. HEMPHILL. Yes, sir.

Senator CAPEHART. This equipment is owned by the Government?

Mr. CLARK. Yes, sir.

Senator CAPEHART. It is in your plant?

Mr. CLARK. Yes, sir.

Senator CAPEHART. Part of it you use and part of it you do not?

Mr. CLARK. We are permitted by the Government to use a saturator tub, for which we pay, and we are also permitted by the Government to from time to time use a drier.

Senator CAPEHART. You want this property handled pretty much the same as the Louisville property is handled? Is that it? Or don't you care?

Mr. CLARK. Sir, we wish to cooperate. This plant or this equipment we have is necessary for the operation of the Louisville facility, and the Government feels I think—I am sure it is correct—that under the present law there is no authority to lease or sell this catalyst equipment or even have it operated by the Government.

Senator CAPEHART. No more questions.

Senator FREAR. Thank you all very much. Good to have had you down here.

Mr. CLARK. Thank you, sir.

Senator BEALL. Mr. Chairman, I have a prepared statement I would like to have inserted in the record. I will not bother reading it.

Senator FREAR. Without objection, the statement of Senator Beall will be inserted in the record.

(The statement of Senator Beall follows:)

STATEMENT OF J. GLENN BEALL, A UNITED STATES SENATOR FROM THE STATE OF MARYLAND

My amendment would authorize the Rubber Producing Facilities Commission to sell or lease certain equipment now located in Baltimore, Md.

This equipment cost some $315,000, and has been written down to about $95,000. It is used to make a special catalyst, a special ingredient, used only in making butadiene from alcohol. I understand that there is no other equipment which will produce this special catalyst. It is therefore necessary that this equipment should be operated, in order that the alcohol butadiene plant at Louisville may continue to run.

Under the present law, I am informed by the Disposal Commission, this equipment cannot be operated.

My amendment is based on section 5 of Public Law 19 of this Congress, which provided for the sale of tank cars owned by the Government.

The Commission's report on the sale of the Institute, W. Va., plant shows that the Louisville plant and this equipment are the only property remaining unsold after the Commission's disposal program.

My amendment will, therefore, make it possible to close out the synthetic rubber program completely.

Senator FREAR. The subcommittee will stand in recess, subject to the call of the chairman.

(Whereupon, at 10:20 a. m., the subcommittee recessed, subject to the call of the chairman.)

(The following was later received for the record:)

UNITED STATES SENATE,
COMMITTEE ON APPROPRIATIONS,
March 9, 1956.

Hon. ALLEN FREAR,
Chairman, Subcommittee on Production and Stabilization,
Senate Banking and Currency Committee, Washington, D. C.

DEAR ALLEN: As previously related to you in correspondence on S. 3091, and as stated in my testimony before your subcommittee, S. 3091 was drafted so as to closely conform to the original and subsequent rubber-producing facilities disposal acts.

It is my understanding that a member of your subcommittee has expressed interest in deviating from the original provisions so as to make any lease of the Louisville facilities made pursuant to S. 3091 subject to congressional review.

I, of course, have no objection to an amendment to accomplish this result.

With kindest personal regards, I am

Sincerely yours,

EARLE C. CLEMENTS.

APPENDIX

Government-Owned Synthetic Rubber Facility, Plancor 1207, Louisville, Ky.

Offered for sale pursuant to Public Law 205, 83d Congress, 1st Session, by Rubber Producing Facilities Disposal Commission, Washington, D. C.

I. GENERAL INFORMATION

The butadiene manufacturing facility at Louisville, Ky., described in this brochure, is one of the units in the Government's synthetic rubber program. Each of the Government-owned plants in this program is now or was operated for the Government's account pursuant to an agreement between the Reconstruction Finance Corporation and the operator. The plant here described was operated by the Carbide & Carbon Chemicals Co., which was supplied ethyl aclohol as a feedstock. Carbide & Carbon Chemical Co. is not accorded any preferential rights in the acquisition of the facility by virtue of this operating agreement or otherwise.

The facilities are now being offered for sale or lease pursuant to the terms of the Rubber Producing Facilities Disposal Act of 1953. The procedure for the submission of proposals, as determined by the Rubber Producing Facilities Disposal Commission, is available upon application to the secretary of the Commission.

The Government's synthetic rubber program is now administered by the Office of Synthetic Rubber of the Reconstruction Finance Corporation. The data furnished in this brochure has been prepared under the direction of the Commission with the assistance of the Reconstruction Finance Corporation and the cooperation of the present contractor. While the Commission believes that the material contained in this brochure accurately and fairly describes the butadiene facility at Louisville, Ky., and its operation, neither this brochure nor the brochures relating to the other facilities in the Government's synthetic rubber program or their operation, is under any circumstances to be deemed any warranty or representation on the part of the Commission, the Reconstruction Finance Corporation, or any other person.

In accordance with the terms of the Rubber Producing Facilities Disposal Act of 1953, interested parties may, upon application to the secretary of the Commission, request such additional data concerning the facilities as they may require for the purpose of submitting proposals. Upon similar application, arrangements may be made to afford interested persons an opportunity to inspect the facilities, and to make such onsite inquiries concerning the plant and its operations as may be necessary and appropriate for the submission of proposals.

This brochure does not deal with possible questions concerning a purchaser's or lessor's rights and obligations which may arise out of patents and patent agreements and restrictions on technical information or on trade secrets that may be applicable to this facility. A separate brochure containing data on such patents, patent agreements, and restrictions and outlining the Commission's proposed arrangements with prospective purchasers or lessors in relation thereto, will be available upon the request of interested parties.

II. DESCRIPTION OF FACILITIES

1. Type of property

The Louisville butadiene plant, Plancor 1207, was designed and operated by the Carbide & Carbon Chemicals Co., a division of Union Carbide & Carbon Corp., for the Reconstruction Finance Corporation to produce butadiene from ethyl alcohol. Ground was broken by the prime contractor, Ford, Bacon & Davis, Inc., in August 1942, and the first unit was put into operation in July 1943.

As designed and built, the butadiene production facilities consist of 3 operating units each with a rated capacity of 20,000 short tons of butadiene per year or a total rated capacity of 60,000 per year for the plant. The demonstrated capacity of this plant is approximately 87,000 short tons per year.

All of the facilities with the exception of the low pressure steam plant, with auxiliary equipment, are now being conditioned for an extended shutdown period.

2. Location

The plant is located on the Ohio River just outside the southwest corner of Louisville, Ky., in an area known locally as "Rubbertown." It lies between the du Pont neoprene plant to the north and a Government-owned synthetic rubber plant (plancor 1278) operated by Kentucky Synthetic Rubber Corp. to the south. The butadiene plant is served by a spur of the Kentucky & Indiana Terminal Railroad and by barge lines. There are facilities for loading and unloading tank cars, barges, and trucks.

Exhibit No. 1 is an aerial map of the property.

Exhibits No. 2 and 2A show the geographical location of the plant and surrounding area.

3. Land, buildings, and equipment

(*a*) *Land.*—The plant site consists of approximately 139 acres of land. As indicated on exhibit No. 3, plot plan of the property, there is considerable room for expansion.

(*b*) *Buildings.*—There are approximately 27 buildings on the plant property of permanent brick, steel, and concrete construction, and 2 sheet metal buildings plus a few small wooden structures used as foam houses and meter houses. A detailed list of the buildings and floor area is set forth in exhibit No. 4.

(*c*) *Tankage.*—The major tankage and auxiliary equipment facilities in the field storage area are used for unloading, storing, and shipping bulk chemicals. It contains 10 tanks having a total storage capacity of 12 million gallons of chemicals at atmospheric pressure and 3,000- to 6,000-barrel hortonspheres having a total storage capacity of 750,000 gallons of chemicals under pressures up to 75 pounds. There are facilities for loading or unloading barges, 12 pressure tank cars, 14 atmospheric tank cars, and 12 tank trucks at the same time

(*d*) *Process equipment.*—Major pieces of equipment for one unit are itemized in exhibits No. 5 and 5A. The plant consists of three units, each of which has its own completely instrumented Dowtherm furnace in a separate building. Basic elements of each unit are approximately 170 indicating and control instruments, 12 converters, 13 still columns, 5 scrubbing columns, 38 tanks, 3 still kettles, 8 compressors, and approximately 50 pumps of varying capacities. Each system has the necessary entrainment separators, condensers, heat exchangers, calandrias, and piping.

(e) *Utilities and service equipment.*—Major pieces of utilities equipment are itemized in exhibit No. 6. Basic elements are an electrical distribution system and switch house, a 400-pound high-pressure steam plant, and a 200-pound low-pressure steam plant having a total capacity of approximately 900,000 pounds of steam per hour, a water-treating plant, and a river pumping station. The river pumping station was originally designed to supply the water requirements for both this plant and the du Pont neoprene plant. The facilities in the pumping station which were built for the neoprene plant were purchased by the du Pont Co. with the purchase of that plant. The steam requirements of the synthetic rubber plant, plancor 1278, operated by Kentucky Synthetic Rubber Corp., are supplied from the steam plants of plancor 1207. Complete mechanical shop facilities are part of the plant equipment.

III. PLANT OPERATION

1. Materials

The plant was designed to produce butadiene of 98 percent purity from ethyl alcohol. The Reconstruction Finance Corporation negotiated the purchase contracts for ethyl alcohol feed stocks and delivery was made by barge, tank cars, and trucks.

Other materials required for the operation of this plant are as follows:

Material	How received	Application
Chlorex (dichlorethyl ether)	Tank car	Selective absorption.
Liquid caustic soda	do	Neutralization of process streams.
Sodium nitrate	400-pound barrels, truck	Inhibit polymer formation.
Tertiary butyl catechol	90-pound drums, truck	Do.
Catalyst	225-pound drums, rail or truck	Butadiene process.
Chlorine	1-ton cylinders, rail	Cooling water, treated water.
Ferri floc	100-pound bags, truck	Treated water.
Santosite	do	Steam boilers.
Sodium phosphate	do	Do.

2. Process

Alcohol vapor is passed over a catalyst in one of the converters where hydrogen is removed converting the alcohol into acetaldehyde. The effluent gases containing approximately 30 percent acetaldehyde are compressed, condensed, and scrubbed to recover all chemicals, and the hydrogen gas is burned as fuel. The recovered chemicals are passed into a distillation system where the acetaldehyde and byproducts are separated and the excess alcohol is recovered for recycling.

The acetaldehyde vapor is mixed with alcohol vapor and this mixture is passed over the catalyst in the butadiene converters. The affluent consists of approximately 12 to 14 percent butadiene, unreacted acetaldehyde and alcohol, byproduct oils and hydrocarbon gases, both saturated and unsaturated. The effluent is compressed, condensed, and scrubbed to recover all chemicals, and the gases are used as fuel.

The recovered chemicals are fed into a forecolumn to separate crude butadiene from the rest of the materials. The tails from this forecolumn are fed back to the acetaldehyde still system where the byproduct oils are removed and the excess acetaldehyde and alcohol are recovered for recycling.

The impurities in the crude butadiene recovered from the forecolumn are acetaldehyde, butylene-1, and butylene-2. The acetaldehyde is removed by scrubbing the vapor with water and the butylene-1 is removed by selective absorption of the butadiene and butylene-2 in chlorex (dichlorethyl ether). The solvent is recycled after distilling out the butadiene and butylene-2. The butylene-2 is removed by continuous fractionation in a three-still system operated in series.

The largest single component of the byproduct oils is ethyl ether. This ether is recovered and the residue oil is burned as fuel. The crude ether is washed and refined and may be either sold as such or hydrated back to alcohol in a small hydration unit, in this plant. The hydration of ethyl ether with subsequent conversion of the alcohol to butadiene increases the overall plant efficiency to butadiene by approximately 4.5 percent.

Exhibit No. 7 is a flow diagram of the process.

3. Products

The 98 percent butadiene produced at this plant was delivered by pipeline to the adjacent Government-owned synthetic rubber plant or shipped by tank car. During World War II pipeline deliveries were also made to the Government-owned copolymer plant operated by the B. F. Goodrich Co. in the Rubbertown area.

The ethyl ether and the butylene mixtures are the only byproducts recovered and shipped for further utilization. The butylene mixtures are of two types, both of which must be washed or redistilled before shipment to reduce chlorides. The two mixtures are:

(*a*) Butylene-2 residues from the refining operation that are high in butylene-2 and low in butadiene content.

(*b*) Butylene-1 from the chlorex absorption system that is high in butadiene and low in butylene-1 content. This material is recondensed, reabsorbed, and redistilled to increase butadiene content prior to shipment of the mixture.

These mixtures could be used as feed stock in thepe troleum butadiene process.

The following rates are those quoted by the railroad for refined butadiene shipped from Louisville, Ky., to:

Freight costs of butadiene in tank car lots from Louisville, Ky., as of Jan. 1, 1954
(Federal transportation tax not included)

Destination	Cost per ton
Akron, Ohio	$15.70
Institute, W. Va	15.70
Naugatuck, Conn	22.68
Baton Rouge, La	23.23
Baytown, Tex	24.71
Borger, Tex	25.88
Houston, Tex	24.71
Port Neches, Tex	23.84
Torrance, Calif	52.91
West Lake Charles, La	23.23

4. Utilities and Services

(*a*) *Electricity.*—Electric power is purchased under contract from the Louisville Gas & Electric Co. Service is received through a direct feeder from the Paddy Run generating plant of the utility company to the plant site. During the 6 months' operating period in 1953 the average cost per kilowatt-hour of electricity was $0.00765.

(*b*) *Natural gas.*—Natural gas is purchased under contract from the Louisville Gas & Electric Co. at a supply pressure of 10 pounds per square inch. During the 6 months' operating period of 1953 the average cost was $0.35 per thousand cubic feet.

(*c*) *Water.*—Water for cooling, fire protection, and the water treating plant is secured from the river pumping station located on the bank of the Ohio River. The station has 5 vertical, submerged-type, 2-stage pumps manufactured by the Fairbanks Morse Co. Each pump has a 900-horsepower motor and a capacity of 15,700 gallons per minute at 180-foot head.

Sanitary water is secured from a deep well. The deep well pump has a capacity of 500 gallons per minute.

(*d*) *Water treating.*—The water treating plant supplies water for boiler feed at the steam plants and for scrubber wash feed in the chemical units. It is an Infilco primary feedwater treatment system which has a capacity of 3,200 gallons per minute of clear water and 2,000 gallons per minute of soft water using sand filters and a polystyrene-type exchange resin. The clear well will hold 126,000 gallons and the soft well 115,000 gallons. There is also a 500,000-gallon emergency storage tank for soft water.

(*e*) *Steam.*—There are two complete steam plants. One contains 3 Babcock & Wilcox boilers each of which has a capacity of 200,000 pounds per hour at 415 pounds per square inch and 575° F. The other contains 3 Combustion Engineering boilers each of which has a capacity of 110,000 pounds per hour of saturated steam at 200 pounds per square inch. These plants are each complete with coal-handling equipment and ash-removal systems.

(*f*) *Waste disposal.*—Neutralizing pits are available to neutralize the acetic acid formed in the process prior to entrance of the tails streams into the process sewers thence to the river. Any heavy oils in such streams are separated in the pits.

Sanitary wastes are handled by conventional septic tanks.

5. Maintenance

The plant is designed to operate continuously and under normal circumstances items of equipment can be shut down and repairs made without serious curtailment of production. The only exception to this is the annual inspection of the Dowthern boilers and even then 2 of the 3 units are usually cut to half capacity and operated from one of the other boilers.

Until the 1953 period of operation the major maintenance item had been the cleaning of the columns that handle butadiene. The trays and bubble caps of these columns become fouled with butadiene polymer.

The 3 refining stills have to be taken apart and cleaned about every 3 months and the rest of the columns at periods varying from 6 to 15 months. During the 1953 period of operation the formation of polymer in the columns was greatly reduced by the addition of an inhibitor. Only one column had to be cleaned and it contained very little polymer. An inspection of the rest of the columns after the plant shutdown revealed only traces of polymer in some of the columns.

All equipment was cleaned or reconditioned prior to placing the plant in standby. Motors, pumps, and instruments were placed inside the buildings. Automatic dehumidifiers were installed in the chemical buildings, the Dowtherm buildings, and the high pressure steam plant and the buildings were sealed by the cocooning process. Blowers inside the buildings circulate dry air through the steel pipelines and equipment.

IV. ORGANIZATION AND ADMINISTRATION

1. Organization and personnel

With 3-unit operation the normal complement of regular full-time employees in this butadiene plant numbers 554, as follows:

Personnel summary

Administrative:	
Superintendent	1
Assistant superintendent	1
Shift supervisors	5
Clerical	3
Subtotal	10
Chemical production and utilities:	
Department heads	4
Technical assistants	6
Area foremen	9
Unit foremen	13
Chief operators	8
Operators	160
Switcher brakemen	3
Coal unloaders	19
Subtotal	222
Maintenance:	
Superintendent	1
Area supervisors	2
Clerical	2
Foremen	5
Blacksmiths	2
Boilermaker-riggers	21
Carpenters	6
Electricians	5
Insulators	14
Laborers	28
Machinists	2
Auto mechanics	1
Millwrights	18
Painters	6
Pipefitters	40
Heavy-equipment operators	5
Sheet-metal workers	1
Welders	4
Toolroom clerks	1
Truckdrivers	5
Instrument repairmen	6
Subtotal	175
Laboratory:	
Department head	1
Chemists	6
Clerical	1
Analysts	12
Samplers	5
Subtotal	25
Engineering:	
Department head	1
Staff	3
Subtotal	4

Personnel summary—Continued

Equipment safety and fire protection:	
Supervisors	2
Staff	2
Firemen	4
Process safety inspectors	4
Subtotal	12
Industrial relations:	
Department head	1
Assistant department head	1
Minor supervisors	3
Clerical	3
Safety inspector	1
Guard sergeants	4
Guards	21
Janitors	14
Subtotal	48
Manufacturing office:	
Department head	1
Assistant department head	1
Minor department heads	3
Clerical	30
Subtotal	35
Traffic:	
Department head	1
Assistant department head	1
Clerical	3
Subtotal	5
Purchasing:	
Department head	1
Assistant department head	1
Clerical	2
Subtotal	4
Stores:	
Minor department head	1
Clerical	5
Stores, receiving clerks	8
Subtotal	14
Total	554

2. *Labor-management relations*

Of the following collective bargaining contracts in effect, all but the last two bargain collectively as the Louisville Building and Trade Council:

Union	*Representing*
International Union of Common Laborers, AFL, Local 576.	Common laborers and janitors.
International Association of Journeymen, Plumbers and Steamfitters, AFL, Local 522.	Pipefitters.
International Brotherhood of Boilermakers, Iron Ship Builders, Welders and Helpers, AFL, Local 40.	Boilermaker-riggers.
International Brotherhood of Electrical Workers, AFL, Local 369.	Electricians.
Brotherhood of Painters, Decorators and Paperhangers, AFL, Local 318.	Painters.

Union	Representing
International Union of Operating Engineers, AFL, Local B–181.	Crane and bulldozer operators.
United Brotherhood of Carpenters and Joiners of America, Falls Cities Carpenters, District Council, AFL.	Carpenters.
International Association of Machinists District 27, Lodge 681, AFL.	Millwrights, machinists, auto mechanics and toolroom attendants.
International Brotherhood of Firemen and Oilers, Local 320, AFL.	Production, stores, and laboratory employees.
International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America, AFL, Local 89.	Truckdrivers.

3. *Wage rates*

The following is a tabulation of the hourly base wage rates:

(*a*) *Production.*—Chemical and boiler operators, $1.66 to $2.11.[1]

(*b*) *Maintenance.*—

	Pusher	Journeymen		Apprentice	Helper
		1st class	2d class		
All crafts except painters	$2.37	$2.22	$2.07	$1.86	$1.76
Painters	2.37	2.17	2.02	1.81	1.76

	Start	3 months	6 months
Laborers:			
Common	$1.56	$1.61	
Skilled	1.56	1.61	$1.66

4. *Safety*

The medical facilities consist of a fully equipped dispensary and an ambulance. When the plant is operating, a full-time nurse is on duty during normal working hours, and a doctor visits the plant twice a week and is on call at all times.

A director and an inspector comprise a safety department which directed a safey program through the last operation with no lost time accidents.

5. *Fire protection*

The fire water lines are of the approved looped main type. There is an overhead storage tank of 100,000 gallons capacity and an open storage tank of 225,000 gallons capacity. There is a connection between the fire water lines of the plant operated by Kentucky Synthetic Rubber Corp. and the butadiene plant, thereby making available an additional 750,000 gallons of water from the synthetic rubber plant in case of an emergency. The system has two 2,000 gallons-per-minute 231-foot head fire water pumps, one electrically driven and the other steam driven. All critical operating equipment is well protected by automatic low pressure type sprinkler systems.

During the last period of operation there were only three small fires at this plant and the dollar loss was negligible.

V. FINANCIAL DATA

This plant has been operated for the account of the Government as an integral part of a programwide operation. In addition to its overall administration of the synthetic rubber program as a governmental activity, the Reconstruction Finance Corporation has centrally administered certain aspects of plant operations without the allocation to plants of the related costs. Among the services referred to are certain phases of materials procurement, sales and credits, and research and development, along with legal and accounting services of the type normally performed by a home office.

The accompanying financial data applicable to this plant are based upon reports prepared by the operator from plant accounting records maintained in accordance with generally accepted commercial accounting practices applicable in the circumstances. The control devices employed in the administration of program

[1] These rates do not include a shift differential of 6 and 12 cents.

operations include outside audit of the plant accounts and records at least annually by independent public accountants under engagement by Reconstruction Finance Corporation.

Generally speaking, however, the practices which have governed the accounting for revenues and the allocation of costs beyond the plant production level have been geared primarily to reflect operations on a programwide basis, rather than by plant, in a manner to meet the needs of overall program administration. Accordingly, no attempt has been made to allocate to individual plants the cost of administering the synthetic rubber program, interest expense, or other expenses and losses incurred at the Washington level.

In addition, revenues derived from the sale of rubber have been allocated entirely to the plants producing finished rubber. The butadiene and styrene plants reflect no revenues, in the conventional sense, for the reason that such plants were supplying a basic raw material to the plants producing finished rubber

Consequently, no conventional balance sheet or profit-and-loss statement for the plant is included herein, since the cumulative results of operations and other financial aspects of programwide operations would have no proper application to individual plants under private ownership and operation.

However, there is presented as exhibit No. 14 a comparative statement of operations of the Government synthetic rubber program for each of the fiscal years ended June 30, 1951, 1952, and 1953, reflecting the results of operations on a programwide basis. This statement includes types and amounts of expenses and losses not identified with, or allocated to, individual plants.

With respect to this particular plant, pertinent data relative to the investment in property, plant and equipment, production costs, and the quantities of end product produced are set forth, in appropriate detail, on the appended exhibits listed below:

Title	*Exhibit No.*
Property, plant, and equipment	9
Construction work in progress	10
Summary of plant production costs	11
Details of plant production costs	12
Details of steam production costs	13

These exhibits and other financial data related to this plant are discussed under appropriate headings in the following paragraphs of this section.

Property, plant, and equipment

As of June 30, 1953, the gross investment in property, plant, and equipment, at cost, aggregated $31,352,939, including property maintained in standby of $4,541,113 and property reported surplus to the plant needs having in that year a net book value of $7,373.

A summary of the status of property, plant, and equipment, by major property classification, at June 30, 1953, is as follows:

Classification	In operation	In standby	Total plant investment
Construction work in progress	$6,866		$6,866
Nondepreciable property	908,761		908,761
Buildings, structures	5,994,864	$643,574	6,638,438
Leasehold improvements	2,584,146	7,819	2,591,865
Machinery and equipment	16,790,813	3,888,904	20,679,717
Durable tools	167,532	521	168,053
Laboratory testing equipment	47,928	295	48,223
Automotive equipment	176,994		176,994
Office, cafeteria equipment	126,549		126,549
Total	26,804,453	4,541,113	31,345,566
Equipment surplus to plant needs			7,373
Total plant investment			31,352,939

The property, plant, and equipment maintained in standby at June 30, 1953, represents a portion of 1 of the 3 production units of the plant, the portion in operation being utilized in the recovery of alcohol through the ether hydration process. Subsequent to June 30, 1953, all units of the plant (with the exception of the utility facilities still being used to supply steam and water to the adjacent

GR–S plant, plancor 1278) have been shut down and placed in standby. Previously, this plant, with the exception of the aforementioned utility facilities, had been maintained in standby during the fiscal years 1946 through 1950.

Exhibit No. 9 shows, by fiscal years from January 1, 1946, a breakdown of the aggregate investment by major property classifications, the totals of additions and retirements and (as supplementary information for ready reference) expenditures for maintenance and repairs made in connection with shutdown, standby, reactivation and production, respectively. The gross investment reflected at the beginning of the period (January 1, 1946), in the amount of $34,142,000 is substantially representative of the original construction cost. The value applicable to property reported surplus to plant needs and subsequently disposed of is included in the amount shown for retirements, transfers, and disposals during the year in which sale, transfer, or other final disposition thereof was effected.

The amounts expended on construction work in progress at June 30, 1953, together with the amounts authorized for each uncompleted project, are reflected on exhibit No. 10.

Depreciation accrual.—Depreciation charges aggregating $22,355,992 have been accumulated for accounting purposes against the property, plant, and equipment remaining in service at June 30, 1953, through the application for such purposes of depreciation rates determined early in the program without the benefit of operating experience. Generally, such depreciation rates were applied to groups of assets on the composite rate theory of average life of the facilities making up the groups. As the program progressed, and as asset groups still in serviceable condition became fully depreciated on the accounting records, it became apparent that the depreciation rates thus established were excessive. However, no revision of the rates has been undertaken. In addition, the application of the rates was continued against the original cost base of the respective asset groups without regard to portions thereof on which depreciation had been fully accrued. The combination of these factors has had a tendency toward the accumulation of excessive depreciation charges. Accordingly, it is apparent that the depreciation accrual of $22,355,992 as compared with gross plant cost of $31,352,939 is not necessarily an indication of the plant condition at June 30, 1953.

Net working assets.—An analysis of the investment in net working assets at this plant at June 30, 1953, is an follows:

Working assets

Cash		$6,020
Receivables		33,026
Prepaid and deferred charges		8,323
Inventories:		
Specification butadiene	$648,761	
Work in process	31,749	
Raw materials, chemicals, etc	1,575,673	
Operating supplies, spare parts and tools	804,353	
Items surplus to plant needs	14,729	
Total inventories		3,075,265
Total working assets		3,122,634
Less: Liabilities		750,565
Net working assets		2,372,069

Inventories of work in process and finished goods are valued at the cost of production, on a first-in, first-out basis. Inventories of raw materials (of which $1,123,450 is alcohol), chemicals, operating supplies, parts and tools are valued at the purchase price, plus freight, on a first-in, first-out basis.

The investment in net working assets, as reflected above, is not necessarily representative of the average amount which may be required under private ownership and operation of the plant.

Plant production costs

The conversion costs shown in exhibit Nos. 11 and 12 represent costs actually incurred in production operations at the plant level but, as aforementioned, do not include the cost of administering the synthetic rubber program, interest expense, and other program expenses and losses incurred and recorded at the Washington level. In addition, such costs do not include provision for depreciation of the plant.

Summary of plant production costs.—A summary of plant production costs, together with material consumption and yields for each of the fiscal years ended June 30, 1951, 1952, and 1953, is presented as exhibit No. 11. Overall production and cost totals shown on the exhibit are summarized as follows:

	1951	1952	1953
Production volume, short tons	22,001	67,486	15,686
Production costs	$19,951,573	$52,817,050	$8,012,318
Cost per pound, cents	45.35	39.13	25.54

As noted on exhibit No. 11, the foregoing does not represent full-scale operations in any of the 3 years. The major factor contributing to the reduction reflected in cost per pound of end product produced was the decline in the price of alcohol, the basic raw material used.

Details of plant production costs.—Details of costs charged to plant production operations during the fiscal year ended June 30, 1953, are set forth in exhibit No. 12. These data include for each production department the individual elements comprising material and conversion costs. The exhibit also shows quantities and average per pound costs of the raw materials consumed, and chemicals used in conversion.

Certain elements of operating expenses, included as a part of conversion costs, would be different under private operation. As previously stated, the costs reflected at the plant level do not include provision for depreciation, and taxes and insurance expense are affected by certain conditions of Government ownership. The plant operating expenses do include a management fee paid to the operator in accordance with the contract for the operation of the facility, and royalties paid on butadiene process patent rights. These elements of cost under the Government synthetic rubber program are accounted for as an operating charge to the particular facility.

Taxes.—A summary of the real property taxes levied against this plant for the last 2 years taxes were paid is as follows:

1952 (PAID OCTOBER 1952)

Tax authority	Assessed valuation	Tax rate per $100	Amount of tax
State of Kentucky	$1,687,795	$0.05	$843.89
County of Jefferson:			
General	1,687,795	.50	8,438.98
School	1,687,795	1.50	25,316.93
Total	1,687,795	2.05	34,599.80
Less: Discount for prompt payment, 2 percent			691.98
Net taxes paid			33,907.82

1953 (PAID OCTOBER 1953)

State of Kentucky	$1,682,500	$0.05	$841.25
County of Jefferson:			
General	1,682,500	.50	8,412.50
School	1,682,500	2.00	33,650.00
Total	1,682,500	2.55	42,903.75
Less: Discount for prompt payment, 2 percent			858.07
Net taxes paid			42,045.68

Insurance.—The insurance expense incurred by this plant under Government operation is limited to premiums paid on the following types of insurance:

Types of insurance	*1953 premium*
(*a*) Workmen's compensation and employers' liability insurance, including occupational diseases	$10,323
(*b*) Comprehensive general liability insurance	36
(*c*) Comprehensive automobile bodily injury and property damage liability insurance	426
(*d*) Steam boiler and machinery insurance	2,455
Total premiums (fiscal year ended June 30, 1953)	13,240

Special premium rates are granted to the Government by the insurance industry under the national defense projects rating plan.

The Government generally follows the practice of self-insuring other types of risks, and no charge to plant production costs is reflected on the appended exhibits for the equivalent premium costs or losses. The losses incurred in the program as a whole are shown on exhibit No. 14.

Maintenance and repairs.—Expenditures for labor and material for maintenance and repair are shown in the following table for each fiscal year. The amounts reflected are for the production department only, being exclusive of such expenses charged directly to auxiliary service departments.

[Amounts in thousands]

Fiscal year	Shutdown	Standby	Reactivation	Operations	Total
1946	$209	$141			$350
1947		228			228
1948		85			85
1949		20			20
1950		162			162
1951		14	$1,280	$390	1,684
1952	18		484	1,313	1,815
1953	312	19	281	292	904
Total	539	669	2,045	1,995	5,248

Generally speaking, the costs reflected for maintenance and repair include expenditures for alterations (including ordinary rearrangement and relocation of plant equipment), renewals, replacements, and betterments unless such expenditures were expected to result in an increase of plant efficiency or productive capacity, or materially to prolong useful service life. In the latter event, such expendutires were capitalized as a part of the investment in property, plant, and equipment.

Services.—There is presented as exhibit No. 13, a statement of production costs for the steam department for the fiscal year ended June 30, 1953, showing the disposition made of steam produced. In addition to facilities for the production of high and low pressure steam, this plant has water pumping and water treating facilities, the operation of which is not presented herein.

VI. EXHIBITS

EXHIBIT NO. 4

Buildings

Building No.	Use	Square-foot area	Building No.	Use	Square-foot area
	The following buildings are of brick and steel, and reinforced concrete construction with 20-year builtup roofs:			The following buildings are 1-story buildings and are of brick with wooden joists for roof support and have 20-year builtup roofs:	
1	Watchmen's gate house	704		Machine shop	10,720
2	Administration and laboratory building	29,001	3	Stores building	10,800
5	High pressure steam plant	15,105	4	Locker room and garage	13,228
6	Butadiene unit No. 5	13,864	15	The following buildings are constructed entirely of sheet metal with steel framing:	
7	Dowtherm building for units Nos. 5 and 6	5,490		Barge unloading house	203
8	Catalyst building (acetaldehyde)	6,281	29	Warehouse	10,000
9	Butadiene unit No. 6	13,864	36	The following small buildings are of wood:	
10	Water pumping station	8,134		Foam houses	508
11	Water treating plant	14,956	24–28	Employees' shelter	490
12	Butadiene unit No. 7	13,864	32	The total area in all 35 buildings is 209,849 square feet.	
13	Dowtherm building for unit No. 7	5,490			
14	Low pressure steam plant	19,793			
16	Electric switch room	3,952			
17	Catalyst building (butadiene)	6,281			
18, 19, 20	Alcohol pumphouses (2, at 566; 1, at 1,092)	2,224			
21	Fire pumphouse	586			
22	Gate and meter house	482			
23	Electric meter house	40			
30	Cafeteria	3,298			
31	Hose cart house	66			
33	Sprinkler control house	208			
34	Sprinkler control house	208			

EXHIBIT NO. 5

Major items of equipment for one unit

Use	No.	Type	Working pressure, p. s. i.	Capacity gallons
STEEL TANKS				
Butadiene	16	Upright	100	6,000
Miscellaneous chemicals	4	do	40	10,200
Do	3	do	20	10,200
Do	11	do	10	10,200
Do	2	do	20	2,500
Dowtherm	2	Horizontal	115	10,000
Steam condensate	1	Upright	10	10,200
Air receiver	1	do	100	6,000
KETTLES				
Utility still kettle	1	Horizontal.	50	10,500
Refining still kettle	2	do	105	8,300

Major items of equipment for one unit—Continued

COMPRESSORS

(All Worthington, steam driven—400-pounds inlet, 75-pounds outlet)

Use	No.	Pressure, p. s. i.		Actual capacity c. f. m.
		Suction	Discharge	
Reaction gases	4	0.5	70	2,480
Butadiene vapors	2	10	75	940
Air	2	Atmospheric	100	1,947

FURNACES

Use	No.	Manufacturer	Working pressure p. s. i.	Capacity, B. t. u. per hour
Vaporize Dowtherm	1	Foster Wheeler.	150	24,000,000 (Useful load)

CONVERTERS

There are 12 converters in each unit. All converters are identical, except for location of connections. Converters are vertical, shell-and-tube, supported on steel skirt welded to bottom head. Heads are welded to shell, and tubes are rolled and welded into tube sheets. Converters are designed for fixed-bed granular catalyst in tubes, liquid Dowtherm circulation through shell.

Material	*Steel*
Inside diameter of shell	10 feet 6 inches.
Overall height	42 feet 10⅛ inches.
Height over heads	36 feet.
Tube length, face to face of tube sheets	19 feet 11¼ inches.
Outside diameter of tubes	3¼ inches.
Tube wall thickness	No. 11 BWG (0.120 inch).
Tube sheet thickness	4 inches.
Number of tubes	753.
Volume:	
Tubes, cubic foot	738.7.
Shell, gallon	6,450 (approximate).
Maximum working pressure tubes, p. s. i	100.
Maximum working temperature tubes, ° C	399 (750° F.).
Maximum working pressure shell, p. s. i	135.
Maximum working temperature shell, ° C	399 (750° F.).

Major items of equipment for one unit—Continued

COLUMNS

Column	Number of column	Diameter, inches	Approximate height ft.-in.	Number trays	Number caps tray	Material		Packing height ft.-in.	Size and type
						Shell	Caps and trays		
Hydrogen scrubber	1	42	48-10	40	42	Copper	Copper		
Byproduct gas scrubber.	2	42	48-10	40	42	do	do		
Chlorex recovery still	1	30	22-8			Steel		14-0	1½-inch porcelain rings.
Utility batch still	1	72	47-6	40	154	Copper	Copper		
Ethanol still (50 pounds).	2	88	65-4	54	234	Lined steel.	do		
Ethanol still (10 pounds).	2	88	48-2	40	234	do	do		
Byproduct still [1]	1	72	64-10	54	156	do	do		
Acetaldehyde still	1	88	65-1	54	232	do	do		
Fore column still [1]	2	72	64-9½	54	156	do	do		
Butadiene product scrubber.	1	42	48-10	40	42	Copper	do		
Butadiene refining still.	2	66	47-2	40	109	Steel	Steel		
Chlorex absorber	1	78	47-2	41	162	do	do		
Chlorex stripping still [2]	1	54	46-10			do			
Oil extractor	1	24	24-6			do		15-0	10-inch porcelain rings.

[1] Bubble caps removed from alternate trays of 1 fore column in each of the 3 butadiene units, and also from the byproduct stills in units Nos. 5 and 7.

[2] Original ring packing removed. Top section contains 3-inch tile rings; 2 sections below feed filled with expanded metal grating, at 6-inch spacing.

NOTE.—All tray columns have 12 inch plate spacing with 3-inch diameter standard round bubble caps. All extractors are provided with liquid distributors and extended heads for liquid separation.

Exhibit No. 5–A

This exhibit lists the auxiliary and service equipment necessary to run one butadiene unit but which has the capacity to and does service all units when the entire plant is in operation.

Number and item:	*Description*
1 tank	Steel, 28,000 gallons capacity at atmospheric pressure for field storage of reserve Dowtherm.
1 tank	Steel, 28,000 gallons capacity at atmospheric pressure for field storage of reserve Chlorex.
2 tanks	Steel, 28,000 gallons capacity at atmospheric pressure for field storage of byproduct oil for fuel.
1 column [1]	Steel, 34-inch diameter, 40-plate, 45 pounds working pressure.
1 column [1]	Steel, 30-inch diameter, 13 feet high, filled with 1-inch steel rings, 30 pounds working pressure.
2 compressors	Worthington, steam driven, suction pressure 40 p. s. i., discharge pressure 150 p. s. i, actual capacity 240 c. f. m. Used for pumping gas for all pressure vent systems.
1 compressor	Worthington, steam driven, suction pressure 0 p. s. i., discharge pressure 165 p. s. i., actual capacity 58 c. f. m. Used for pumping gas for all instrument blowback systems.
1 compressor	Worthington, electric driven, suction pressure 2 p. s. i., discharge pressure 165 p. s. i., actual capacity 44 c. f. m. Used for pumping gas for all instrument blowback systems.
1 nitrogen generator	Complete with combustion chamber, scrubbing towers, and alumina driers. Burns hydrogen gas in air to produce nitrogen for instrument blowback system. The rated capacity is 50 c. f. m.

[1] These 2 columns are part of the facilities required to recover butadiene in the absorber blowoff gases from the butadiene units. One of the 2 air compressors at No. 7 unit was used in this system.

Exhibit No. 6

Major items of equipment in utilities department

Item	Description	No.	Size	Use
Steam	Babcock & Wilcox integral furnace with superheater.	3	415 p. s. i., 575° F. 200,000 pounds per hour.	Steam requirements.
Do	Combustion engineering, type VU.	3	200 p. s. i., saturated 110,000 pounds per hour.	Do.
Water treating	Infilco primary feed-water treatment system using synthetic cation zeolite, sodium cycle, softener.	1	2,000 g. p. m.	Boiler water and process water.
River pumping station.	Deep-well type on the Ohio River.	1	78,500 g. p. m.	All raw water requirements.
Electrical distribution system.	Designed to reduce 13,500-volt power supply to required voltage, and to control and distribute to various items of equipment.			Lighting, heating, and motor operation.

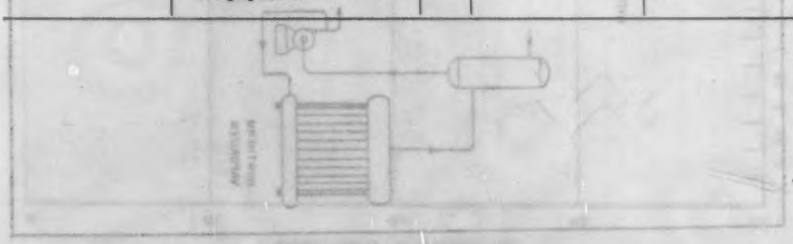

EXHIBIT No. 7

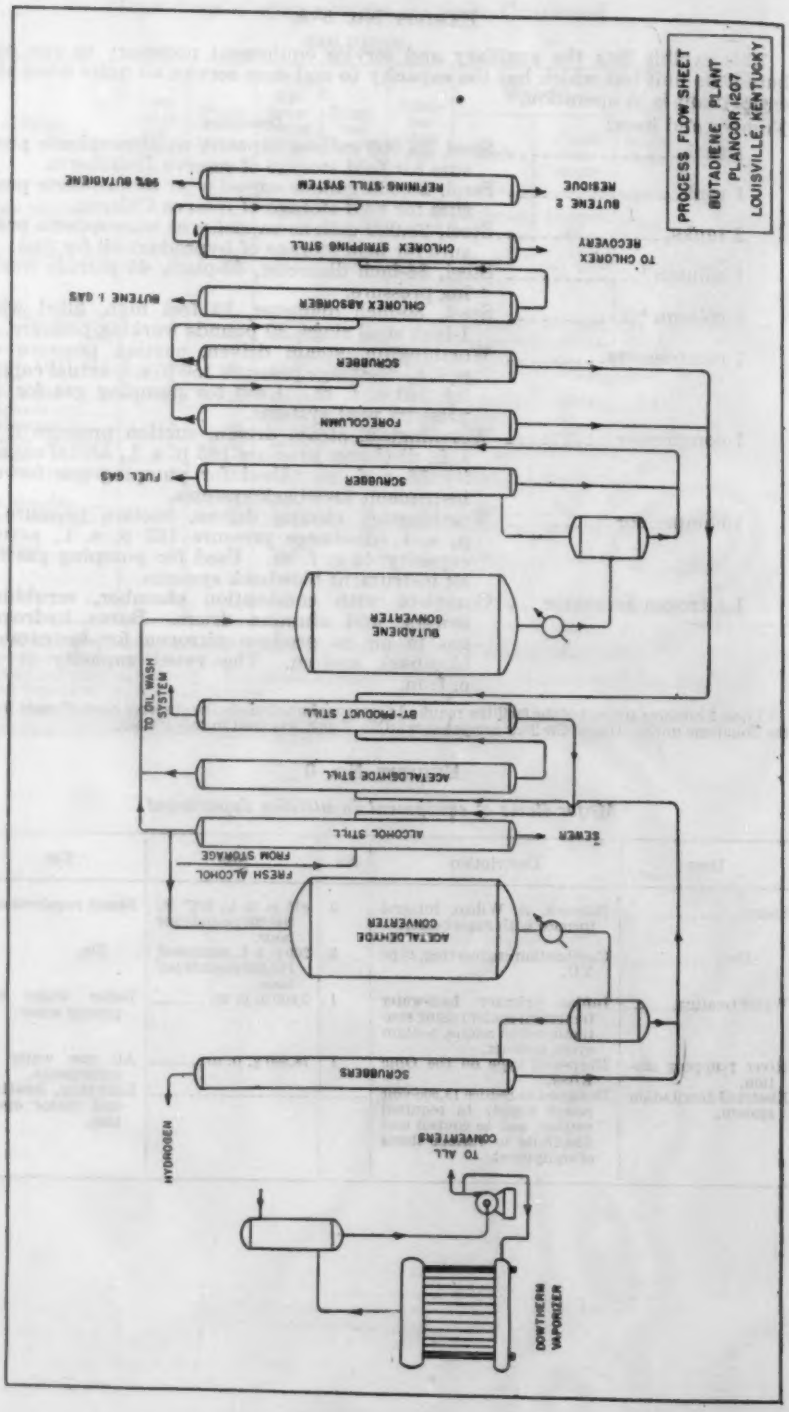
PROCESS FLOW SHEET
BUTADIENE PLANT
PLANCOR 1207
LOUISVILLE, KENTUCKY
98% BUTADIENE
REFINING STILL SYSTEM
BUTENE 2
RESIDUE
CHLOREX STRIPPING STILL
TO CHLOREX
RECOVERY
BUTENE 1 GAS
CHLOREX ABSORBER
SCRUBBER
FORECOLUMN
SCRUBBER
FUEL GAS
BUTADIENE
CONVERTER
TO OIL WASH
SYSTEM
BY-PRODUCT STILL
ACETALDEHYDE STILL
ALCOHOL STILL
SEWER
FRESH ALCOHOL
FROM STORAGE
ACETALDEHYDE
CONVERTER
SCRUBBERS
HYDROGEN
TO ALL
CONVERTERS
DOWTHERM
VAPORIZER

EXHIBIT No. 8.—PRODUCTION OF NEW BUTADIENE

Plancor 1207, Louisville, Ky., operated by Carbide & Carbon Chemicals Co.

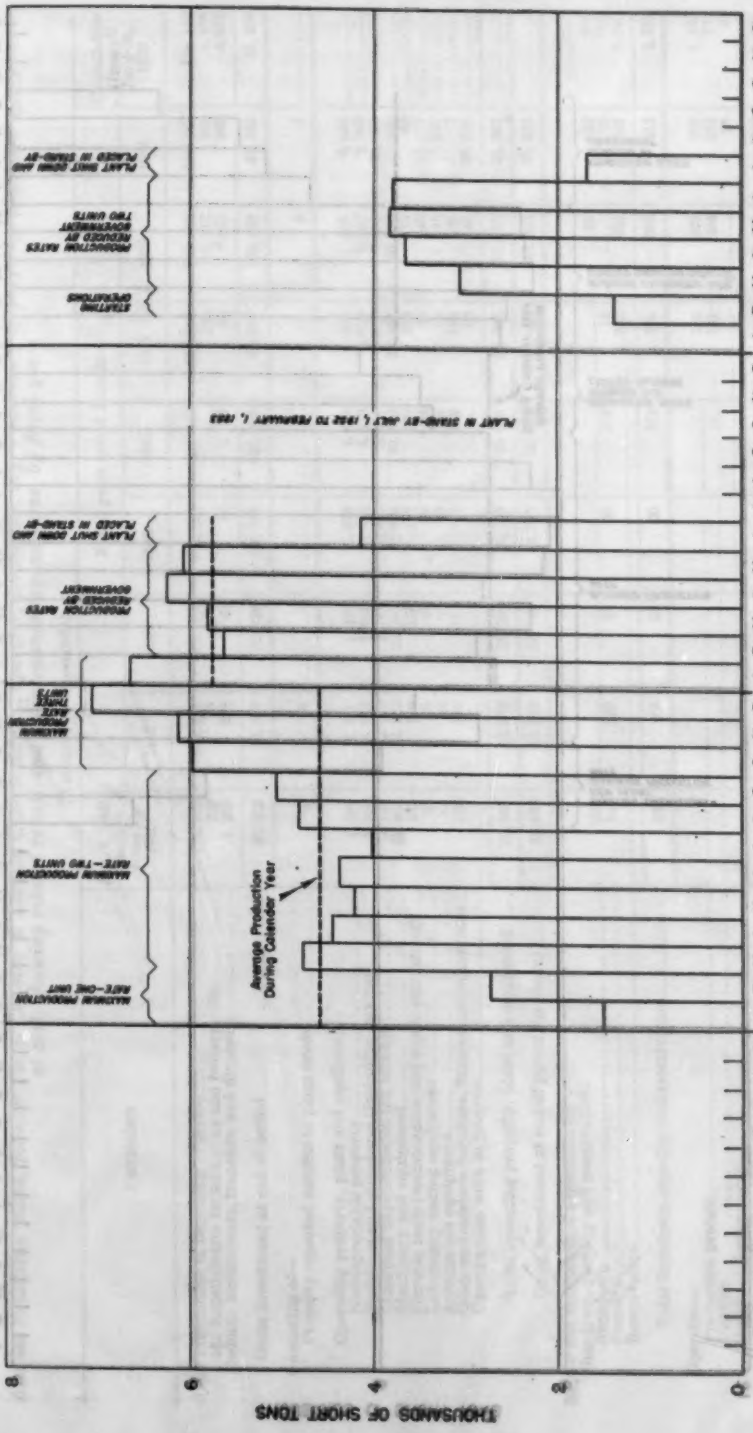
THOUSANDS OF SHORT TONS
0
10
20
30
40
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1950
1951
1952
1953
Average Production During Calendar Year
PLANT IN STAND-BY JULY 1, 1952 TO FEBRUARY 1, 1953
STARTING OPERATIONS
PRODUCTION RATES REDUCED BY GOVERNMENT
PLANT SHUT DOWN AND PLACED IN STAND-BY
MAXIMUM PRODUCTION RATE — ONE UNIT
MAXIMUM PRODUCTION RATE — TWO UNITS
MAXIMUM PRODUCTION RATE THREE UNITS
PRODUCTION RATES REDUCED BY GOVERNMENT
PLANT SHUT DOWN AND PLACED IN STAND-BY

EXHIBIT No. 8A.—PRODUCTION OF NEW BUTADIENE

Plancor 1207, Louisville, Ky., operated by Carbide & Carbon Chemicals Co.

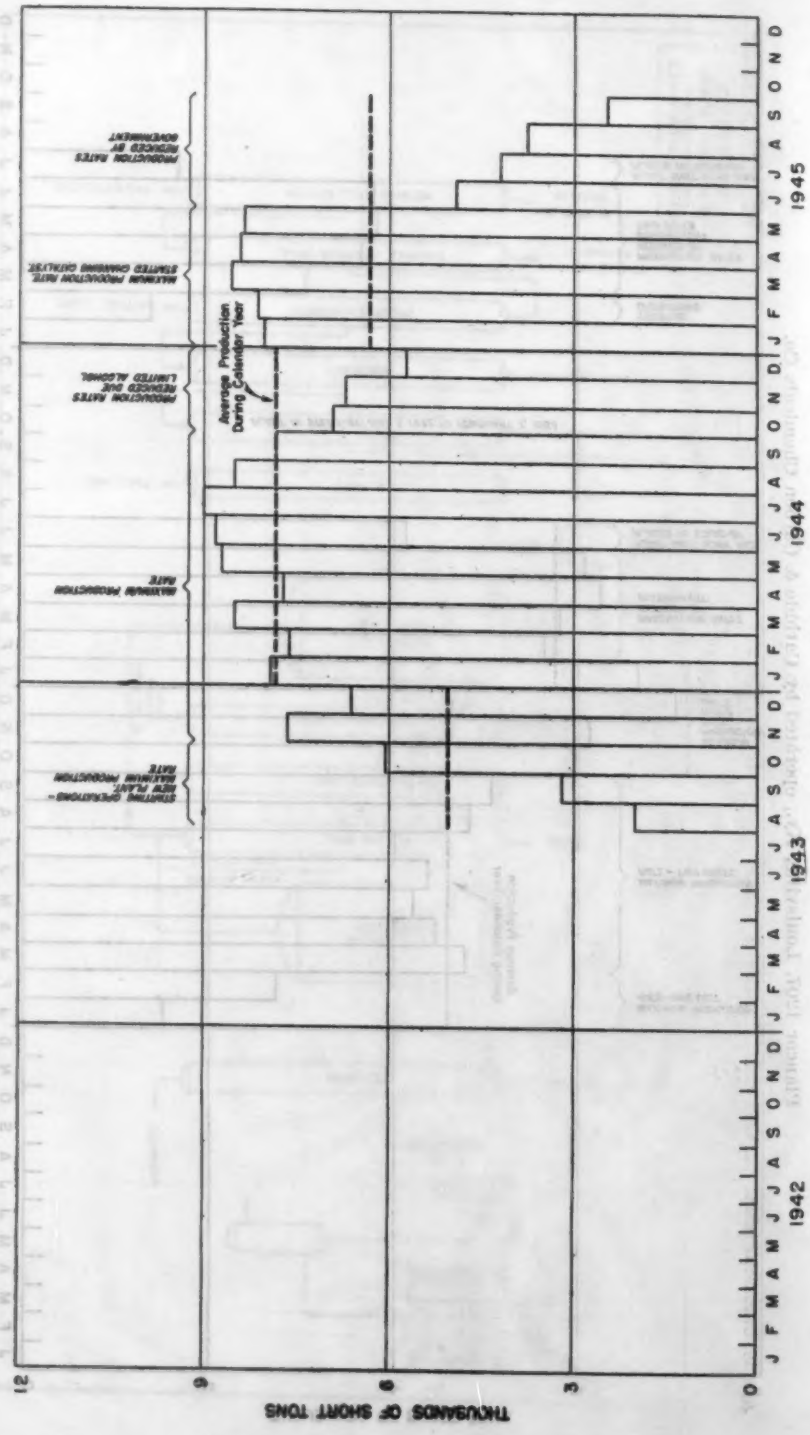
THOUSANDS OF SHORT TONS
12
9
6
3
0
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1942
1943
1944
1945
STARTING OPERATIONS—NEW PLANT; MAXIMUM PRODUCTION RATE
MAXIMUM PRODUCTION RATE
PRODUCTION RATE REDUCED DUE LIMITED ALCOHOL
Average Production During Calendar Year
MAXIMUM PRODUCTION RATE, STATED CHARGE CATALYST
PRODUCTION RATE REDUCED BY GOVERNMENT

EXHIBIT No. 9

Alcohol butadiene plant, plancor 1207, Carbide & Carbon Chemicals Co., operator, Louisville, Ky.—summary of property, plant and equipment at cost, showing related repair and maintenance expenditures, by fiscal years

[Amounts in thousands]

Particulars	Jan. 1, 1946, through June 30, 1946	Fiscal years ended June 30—							Cumulative through June 30, 1953
		1947	1948	1949	1950	1951	1952	1953	
Gross investment at beginning of period	$34,142	$33,022	$32,819	$32,786	$32,768	$30,606	$30,686	$31,443	$34,142
Add: Expenditures for additions and betterments	200	25	14			126	[1] 1,412	109	1,886
Deduct: Retirements, transfers, and disposals	1,320	228	47	18	[2] 2,162	46	[2] 655	199	4,675
Gross investment at end of period	33,022	32,819	32,786	32,768	30,606	30,686	31,443	31,353	31,353
Consisting of—									
Property reported surplus to plant needs	40	6					5	7	
Operating property, plant and equipment:									
Nondepreciable property	1,351	1,376	1,376	1,373	1,373	909	909	6,638	
Buildings and structures (including services)	6,620	6,622	6,622	6,622	6,619	6,619	6,637	2,592	
Leasehold improvements (on and off)	2,149	2,149	2,141	2,141	2,141	2,606	2,618	20,680	
Machinery and equipment	22,404	22,292	22,285	22,276	20,119	20,107	20,734	168	
Durable tools (maintenance and repair equipment)	225	186	176	171	170	169	174	48	
Laboratory testing equipment	30	28	28	28	28	46	48	177	
Automobile equipment	64	43	43	43	43	54	145	127	
Office and cafeteria furniture, fixtures, and equipment	139	117	115	114	113	123	126	7	
Construction work in progress						53	47	31,346	
Total operating property, plant and equipment	32,982	32,813	32,786	32,768	30,606	30,686	31,438	31,353	
Gross investment at end of period (as above)	33,022	32,819	32,786	32,768	30,606	30,686	31,443	31,353	
Repair and maintenance expenditures:									
Shutdown, standby and reactivation:									
Shutdown	209						18	312	539
Standby	141	228	85	20	162	14		19	669
Reactivation						1,280	484	281	2,045
Total shutdown, standby and reactivation	350	228	85	20	162	1,294	502	612	3,253
Operations:									
Production process						259	829	102	1,190
Utilities						131	484	162	777
Overhead departments								28	28
Total operations						390	1,313	292	1,995
Total repair and maintenance expenditures	350	228	85	20	162	1,684	1,815	904	5,248

[1] Represents chiefly replacement of insulation for the entire plant.

[2] Represents chiefly writeoff of catalyst.

EXHIBIT No. 10

Analysis of construction work in progress at June 30, 1953

Project	Amount (cents omitted)	
	Authorized	Expended
Install additional fire protection (spray equipment in all units)	$45,000	
Galvanized steel prefabricated warehouse	33,528	$1,192
Installation of 2 vapor hoods with scrubbers	4,000	1,119
Installation of 12 thermocouples in converter	3,000	
3 mechanical type fly ash collectors	300,000	
Replace 15,000 square feet steel grating	32,250	4,555
Miscellaneous	2,656	
Total construction work in progress	420,434	6,866

EXHIBIT No. 11

Alcohol Butadiene Plant, Plancor 1207, Carbide and Carbon Chemicals Co., operator, Louisville, Ky.—Summary of plant production costs (exclusive of depreciation), fiscal years ended June 30, 1951, 1952, and 1953

Major cost element	1951 [1]		1952 [2]		1953 [3]	
	Amount (in thousands)	Cents per pound	Amount (in thousands)	Cents per pound	Amount (in thousands)	Cents per pound
Production costs:						
Net alcohol feedstocks consumed	$17,234.2	39.17	$45,444.6	33.67	$6,281.2	20.02
Conversion costs:						
Chemicals	517.1	1.18	1,145.0	.85	211.6	.67
Utilities	1,016.6	2.31	2,934.7	2.17	783.5	2.50
Operating expenses:						
Management fee	295.4	.67	652.8	.48	214.0	.68
All other	888.3	2.02	2,640.0	1.96	522.0	1.67
Total conversion costs	2,717.4	6.18	7,372.5	5.46	1,731.1	5.52
Total plant production costs	19,951.6	45.35	52,817.1	39.13	8,012.3	25.54
Production (short tons): Specification butadiene	22,001	45.35	67,486	39.13	15,686	25.54
Material consumption (short tons): Alcohol undenatured	73,873	11.66	211,485	10.74	45,404	7.07
Yield (weight percent)	29.78		31.91		34.55	

[1] Represents operation of 2 of the 3 units of the plant during the last half of the fiscal year, 1 unit having been started up in January 1951 and the other in February 1951.

[2] Represents operation of 2 of the 3 units of the plant throughout the fiscal year, together with the 3d unit from September 1951; however, all 3 units were shut down at the close of the fiscal year and maintained in standby until February 1953.

[3] Represents operation of 2 of the 3 units of the plant during the last half of the fiscal year, 1 unit having been started up in February 1953 and the other in March 1953.

EXHIBIT No. 12

Alcohol butadiene plant plancor 1207 Carbide & Carbon Chemicals Co., operator Louisville, Ky.—Details of plant production costs (exclusive of depreciation) for the 5 months ended June 30, 1953 [1]

Cost element	Materials consumed			Production costs	
	Quantity	Unit	Average unit cost	Amount	Cents per pound
Raw materials consumed:					
Alcohol, undenatured:	*Thousands*		*Cents*	*Thousands*	
New material	90,931.2	Pounds	7.07	$6,425.0	20.48
Less: Returned material	[2] 123.0	do	7.64	9.4	.03
Gross materials consumed	90,808.2	do	7.07	6,415.6	20.45
Less: Byproduct credits				134.4	.43
Net materials consumed				6,281.2	20.02
Conversion costs:					
Chemicals:					
Catalyst	181.5	Pounds	66.78	121.2	.39
Chlorex	228.4	do	11.82	27.0	.08
Dowtherm oil	19.30	do	27.95	54.0	.17
Caustic soda	144.0	do	2.25	3.2	.01
TBC	1.9	do	188.70	3.5	.01
Sodium nitrate	30.8	do	8.43	2.6	.01
Filtros	.8	do	9.25	.1	
Total chemicals	780.4	do	27.12	211.6	.67
Utilities:					
Steam	1,319.2	Million B. t. u.	47.16	622.1	1.98
Electric power	3,642.4	Kilowatt-hour	.76	27.7	.09
Fuel	144.6	Million B. t. u.	34.22	49.5	.16
Water				84.2	.27
Total utilities				783.5	2.50
Operating expenses:					
Operating labor and supervision				143.3	.46
Operating supplies and expense				15.0	.05
Repairs and maintenance:					
Labor				78.9	.25
Materials				20.5	.06
Laboratory expense				51.7	.17
Packaging and shipping				16.1	.05
Property taxes				12.8	.04
Royalties				39.2	.13
Management fee				214.0	.68
Other plant overhead				144.5	.46
Total operating expenses				736.0	2.35
Total conversion costs				1,731.1	5.52
Total production costs				8,012.3	25.54
Production (short tons): Specification butadiene				15,686	25.54

[1] Represents operation of 2 of the 3 units of the plant during the last half of the fiscal year, 1 unit having been started up in February 1953 and the other in March 1953. The other unit was maintained in standby status throughout the year. The costs of shutdown, maintenance in standby, and reactivation are excluded from the production costs reflected hereon.

[2] Alcohol equivalent of butadiene-butylene mixture.

EXHIBIT No. 13

Alcohol butadiene plant, plancor 1207, Carbide and Carbon Chemicals Co., operator, Louisville, Ky.—Major utilities production costs, steam generation plant (exclusive of depreciation), fiscal year ended June 30, 1953

Cost element	Materials consumed		Amount (cents omitted)	Cents per thousand pounds
	Unit	Quantity		
Raw materials:				
Coal	Tons	106,844	$483,924	20.84
Fuel gas (purchased)	Thousand cubic feet	118,862	43,086	2.39
Fuel oil	Gallons	14,628	2,884	.16
Butadiene oil	Pound	801,821	18,037	1.00
Butadiene-butylene mixture	do	20,847	53	
Ethyl ether	do	306,860	1,005	.06
Treated water	Thousand gallons	239,588	64,311	3.57
Steam condensate	do	20,921	9,765	.54
Total raw materials			623,065	34.56
Chemicals:				
Santosite	Pounds	7,735	807	.05
Sodium phosphate	do	9,200	1,296	.07
Other chemicals	do	15,257	747	.04
Total chemicals		32,192	2,850	.16
Utilities:				
Steam	Thousand pounds	261,849	232,660	12.91
Electric power	Kilowatt-hour	2,813,402	22,419	1.24
Raw water	Thousand gallons	128,040	1,484	.08
Total utilities			256,563	14.23
Other costs:				
Operating labor			114,972	6.38
Operating supervision			19,703	1.09
Maintenance and repair:				
Labor			103,250	5.73
Material			37,606	2.09
Operating supplies and expense			8,859	.49
Property taxes			3,292	.17
Other plant overhead			130,289	7.23
Total, other costs			417,971	23.18
Total steam production costs	Thousand pounds	1,802,836	1,300,449	72.13
Less steam used in steam plant	do	261,849	232,660	88.85
Net cost of steam produced	do	1,540,987	1,067,789	69.29
Distribution:				
Furnished to others:				
Adjacent GR-S plant (plancor 1278)	do	327,370	346,593	105.87
Less depreciation charges included			31,738	9.69
Net charge (exclusive of depreciation)	do	327,370	314,855	96.18
Plant usage (including standby)	do	1,213,617	752,934	62.04
Total (as above)	do	1,540,987	1,067,789	69.29

EXHIBIT No. 14

Government synthetic rubber program—Comparative statement of program operations

INCOME AND EXPENSE

	Fiscal years ended June 30—		
	1951	1952	1953
Income:			
Sales of synthetic rubber	$298,143,047	$415,932,537	$387,712,241
Other income	739,542	625,632	528,423
Total income	298,882,589	416,558,169	388,240,664
Operating cost and expenses:			
Cost of rubber sold	217,450,504	331,124,705	306,818,629
Depreciation of operating plants and facilities	33,365,611	40,635,392	[1]
Research and development	5,989,677	6,939,476	6,084,387
Adjustment of raw material inventories to the lower of cost or market		5,023,513	231,017
Excess of sales freight expense over freight charged to customers	2,268,133	(104,249)	1,065,068
Storage and handling of finished goods	417,363	930,894	825,449
Administrative expense	1,820,931	2,391,765	2,110,459
Losses from fire and other casualties	579,939	1,383,451	1,410
Interest on U. S. Government funds invested in net operating assets	3,663,519	5,305,646	4,963,085
Other expenses and losses	142,449	845,172	2,290,125
Total operating costs and expenses	265,698,126	394,475,765	324,390,629
Net income from operations	33,184,463	22,082,404	63,850,035
Other expenses:			
Provision for shutdown expense		3,000,000	1,500,000
Plant reactivation expense	20,565,139	1,982,158	908,129
Expenses for maintenance and protection of standby plants and facilities (includes $850,123 depreciation on standby plants for 1952 and $1,104,928 for 1953)	691,531	986,704	1,512,296
Total other expenses	21,256,670	5,968,862	3,920,425
Net income	11,927,793	16,113,542	59,929,610

PRODUCTION AND SALES IN LONG TONS

Production:			
GR-S [2]	528,841	715,732	637,748
Butyl	65,625	83,534	75,021
Total synthetic rubber production	594,466	799,266	712,769
Sales:			
GR-S [2]	521,683	674,573	658,888
Butyl	65,482	71,978	80,252
Total sales of synthetic rubber	587,165	746,551	739,140

[1] Depreciation of operating plants and facilities amounted to $31,437,980 for 1953 of which $28,151,213 was allocated to cost of production and $3,286,767 to other cost and expense categories and net income has been affected accordingly.

[2] Includes net GR-S content of rubber pigmented with carbon black and extended with oil.

GOVERNMENT-OWNED SYNTHETIC RUBBER FACILITY, BALTIMORE, MD.

I. GENERAL INFORMATION

The facility at Baltimore, Md, described in this brochure, has been utilized in the Government's synthetic rubber program in the manufacture of a catalyst for the alcohol butadiene process. Each of the Government-owned plants in this program is now operated for the Government's account pursuant to an agreement between the Reconstruction Finance Corporation and the operator. The Davison Chemical Corp., the operator of the facility here described, is not accorded any preferential rights in the acquisition of the facility by virtue of this operating agreement or otherwise.

The facilities are now being offered for sale pursuant to the terms of the Rubber Producing Facilities Disposal Act of 1953. The procedure for the submission of proposals to purchase, as determined by the Rubber Producing Facilities Disposal Commission, is available upon application to the Secretary of the Commission.

The Government's synthetic-rubber program is now administered by the Office of Synthetic Rubber of the Reconstruction Finance Corporation. The data furnished in this brochure have been prepared under the direction of the Commission with the assistance of the Reconstruction Finance Corporation and the cooperation of the present operating contractor. While the Commission believes that the material contained in this brochure accurately describes the facility at Baltimore, neither this brochure nor the brochures relating to the other facilities in the Government's synthetic rubber program or their operation, is under any circumstances to be deemed any warranty or representation on the part of the Commission, the Reconstruction Finance Corporation, or any other person.

In accordance with the terms of the Rubber Producing Facilities Disposal Act of 1953, interested parties may, upon application to the Secretary of the Commission, request such additional data concerning the facilities offered for sale as they may require for the purpose of submitting purchase proposals. Upon similar application, arrangements may be made to afford interested persons an opportunity to inspect the facilities offered for sale, and to make such on-site inquiries concerning the equipment and its operations as may be necessary and appropriate for the submission of proposals.

It is contemplated that the purchaser of this equipment, if other than the Davison Chemical Corp., will either dismantle and remove the equipment or make arrangements with the Davison Chemical Corp. for use in the present location.

The Davison agreements include the leasing of space for the Government's equipment, as well as arrangements to cover the commingled saturator and leaching facilities.

This brochure does not deal with possible questions concerning a purchaser's rights and obligations which may arise out of patents and patent agreements and restrictions on technical information or on trade secrets that may be applicable to this facility. A separate brochure containing data on such patents, patent agreements, and restrictions, and outlining the Commission's proposed arrangements with prospective purchasers in relation thereto, will be available upon the request of interested parties.

II. DESCRIPTION OF FACILITIES

The equipment herein offered for sale is located on the property of Davison Chemical Corp. at Baltimore, Md. The equipment has been used (in conjunction with other equipment owned by Davison Chemical Corp.) to produce a granular catalyst (silica gel impregnated with tantalum oxide) used in the conversion of an ethyl alcohol acetaldehyde mixture to butadiene. The month of last operation was August 1952.

Exhibit No. 1 is a summary of major items of equipment.

III. FINANCIAL DATA

Silica gel catalyst equipment in standby at Dec. 31, 1953—The Davison Chemical Corp., operator, Baltimore, Md.

	Amount
Equipment transferred, at cost, from the Alcohol Butadiene Plant (Plancor 1207, operated by Carbide & Carbon Chemicals Co.)	$53, 960. 90
Additional equipment purchased	93, 586. 97
Total acquisition cost of equipment	147, 547. 87
Add: Engineering, research, and installation costs (see (1), below)	188, 681. 67
Total cost of equipment	336, 229. 54
Deduct: Retirements and disposals	20, 334. 26
Total cost of equipment in standby (see (2), below)	315, 895. 28
(1) Reserve for amortization at Dec. 31, 1953 $171, 516. 67	
(2) Reserve for depreciation at Dec. 31, 1953 49, 471. 13	
	220, 987. 80
Net book value at Dec. 31, 1953	94, 907. 48

IV. EXHIBITS

EXHIBIT No. 1.—*Major items of equipment, catalyst manufacturing plant, Baltimore, Md.*

IMPREGNATION EQUIPMENT—BUILDING NO. 23

RFC equipment No.	Equipment description	Status
B23-1000	Impregnator, silver-lined tank complete with silver coil, stays and openings as shown on Philadelphia Copper Smithing Co. drawing 1566. Body of 3/16-inch steel and lined with 1/16-inch fine silver. Coil of 1¼ inches O. D. No. 12 B. & S. gage, fine silver, 2 feet 6 inches diameter by 4 feet 0 inches high. Also complete with silver basket in accordance with Philadelphia Copper Smithing Co., card No. 900. All fine silver, 1 foot 7¼ inches O. D. by 2 feet 6 inches high with perforated bottom and wire screen covers.	Standby.
B23-1001	Duplicate of B23-1000 less silver basket	Do.
B23-1002	Mechanical steam flow meter, recording and integrating Model No. 222 TIF, Brown Instrument Co., to measure 100 p. s. i. g. steam at 6,000 pounds per hour maximum, with mercury, valve manifold, orifice, tapped flanges, condenser pots, and piping assembly.	Do.
B23-1003A	Worthington centrifugal pump, Model ICN-42 to handle 50 g. p. m. and provide 25 p. s. i. increase in pressure complete with CI pipe connections, valves and fittings, pressure reducing and regulating valve, mercury pressure switch and bronze relief valve.	Do.
B23-1003B	2-horsepower totally enclosed fan-cooled GE motor, 440-volt, 3-phase, 60-cycle, 3,600 r. p. m.	Do.
B23-1003C	Combination motor starter with fused disconnect switch, oil immersed, 3-pole, 600-volt, 60-cycle, manual reset, Rowan type 780 KBF, Frame 50, complete with 15-ampere fuses, overload relays for 2-horsepower, 440-volt, 3-phase, 60-cycle induction motor, extra normally open auxiliary switch and operating coil for separate 115-volt, 60-cycle control circuit.	Do.
B23-1003D	Pushbutton switch, maintained contact, oil immersed, marked "Stop-Start," Rowan type 650, style B.	Do.
B23-1004A	Water Filter, 4 feet 0 inch diameter by 4 feet 0 inch high straight shell for operation at 80-pound water pressure. Complete with under piping, front piping, change flow valves, filter material, and rate-of-flow indicator.	Do.
B23-1004B	Cation exchanger, 3 feet 0 inch diameter by 8 feet 6 inches high straight shell, rubber lined for operation at 80-pound water pressure. Complete with Uscolite pipe under drain. 26 cubic feet of Amberlite No. IR120 Zeolite with Anthrafilt supporting bed, pressure gage, Eductor, air relief, Uscolite front piping and 1½-inch size rubber-lined Hills McCanna valves to control flow and regeneration.	Do.
B23-1004C	Annion exchanger, 3 feet 0 inch diameter by 5 feet 0 inch high straight shell, rubber lined for operation at 80-pound water pressure. Complete with Uscolite pipe under drain, 14 cubic feet of Amberlite IR4B Zeolite with Anthrafilt supporting bed, pressure gage, Eductor, air relief, Uscolite front piping and 1½-inch size rubber-lined Hills McCanna valves to control flow and regeneration.	Do.
B23-1004D	Weak acid regeneration tank, 27 inches diameter by 2 feet 6 inches high, rubber lined.	Do.
B23-1004E	Strong acid regeneration tank, 12 inches diameter by 1 foot 6 inches, steel.	Do.
B23-1004F	Soda ash preparation tank for regeneration, 3 feet 6 inches diameter by 3 feet 0 inch high with eductor.	Do.
B23-1004G	Sump box, steel rubber lined with orifice plate, back wash, rinse control valves and rate-of-flow indicator.	Do.
B23-1004H	Motor-driven Lightening mixer with rubber covered shaft for use with the acid and soda ash preparation tanks. Motor for use on 110-volt, 60-cycle, single-phase current.	Do.
B23-1004J	Water meter for demineralization, Neptune Meter Co., 1-inch trident split case disk meter, complete with standard register and 1-inch couplings.	Do.
B23-1004K	Conductivity cell for demineralization	Do.
B23-1004L	Pushbutton switch, monetary contact, oil immersed, marked "Stop-Start."	Do.
B23-1004M	Coagulant chemical feeder 8 inches I. D. by 9 inches high	Do.
B23-1005A	Treated water storage tank, mild steel, rubber lined 10 feet 0 inches diameter by 10 feet 0 inches high, complete with inlet and outlet Uscolite and copper pipe, overflow and float-controlled inlet valve.	Do.
B23-1005B	Midget mode[1] levelometer complete with 65 feet of tubing. Calibrated in United States gallons. Liquid measured, 60° F. water.	Do.
B23-1006	Heat exchanger, model W-2-860. Special to heat deionized water from 50° F. to 170° F. at a maximum rate of 60 g. p. m. using steam at 80 p. s. i. g. Pressure drop through exchanger not to exceed 5 feet of water.	Do.
B23-1007	Steam jet heater, Schutte Koerting Co., fig. 327, size 1½ inches, steam connection, ¾-inch, all bronze. Heat 20 g. p. m. of water from 150° F. to 200° F. with 100 p. s. i. g. steam and 10 feet head on water.	Do.

EXHIBIT No. 1.—*Major items of equipment, catalyst manufacturing plant, Baltimore, Md.*—Continued

IMPREGNATION EQUIPMENT—BUILDING NO. 23—Continued

RFC equipment No.	Equipment description	Status
B23-1008A	American Blower No. 350E fan with LS wheel, arrangement 1-B, clockwise up-blast discharge, Heresite enamel coated wheel and inside housing, ball bearings, flanged inlet and outlet. Complete with V-belt drive for operation at 1,513 r. p. m., 4,203 cubic feet at 6 inches S. P.	Standby.
B23-1008B	7½-horsepower motor, totally enclosed, 220/440 volts, 3-phase, 60-cycle, 1,800 r. p. m. synchronous speed, horizontal squirrel cage induction, normal starting torque, frame 284, GE "Triclad" type K. Complete with sliding base frame 284.	Do.
B23-1008C	Combination motor starter with fused disconnect switch, oil immersed, 3 pole, 600-volt, 60-cycle manual reset, Rowan type 780 KBF, frame 50. Complete with oil, 30-ampere fuses and overload relays.	Do.
B23-1008D	Pushbutton switch, momentary contact, oil immersed, marked "Stop-Start." Rowan type 650, style A.	Do.
B23-1009	S. S. type 304, ammonia solution tank, 2 feet 0 inch diameter by 4 feet 0 inch high with sparge pipe and mild steel legs.	Do.
B23-1010	Duplicate of B23-1009	Do.
B23-1011	Fume scrubber, type 304 S. S., 4 feet 0 inch diameter by 8 feet 0 inch high.	Do.
B23-1012	Hopper, type 304 S. S., 2 feet 6 inches by 2 feet 6 inches by 4 feet 3 inches high. Complete with chute, gate, and mild steel bearing and support parts.	Do.
B23-1013	Duplicate of B23-1012	Do.
B23-1014	Wood, lead-lined sink, complete with water connections and drain	Do.
B23-1015	Cabinet-type workbench, Hallowell, 1¾-inch laminated top	Do.
B23-1016	Emergency shower, Sanitary Supply Cat. No. S2075. Consists of 1 8-inch needle shower, ¾-inch inlet, and 1 ¾-inch quick operating, self-closing valve. Pull chain operated.	Do.
B23-1017	Duplicate of B23-1016	Do.
B23-1018	Eye washing fountain, Industrial Products Co	Do.
B23-1019	Duplicate of B23-1018	Do.
B23-1020	Lumber and plywood hopper and chute with type 304 S. S., 8 mesh wire screen, complete with barrel loading chutes and socks.	Do.
B23-1021A	Cleveland-Tramrail monorail system approximately 36 feet long with enclosed conductor bars for 3-phase current and 2,000-pound capacity electric hoist for tag line operation.	Do.
B23-1021B	Safety disconnect switch, 3-pole, 30-ampere, 600-volt, oil immersed, fused, complete with 15-ampere fuses, Rowan type 620-A.	Do.
B23-1022A	Cleveland-Tramrail monorail system closed circuit comprising approximately 70 lineal feet of rail with enclosed conductor bars for 3-phase current and 2,000-pound capacity electric hoist for tag line operation.	Do.
B23-1022B	Safety disconnect switch, 3-pole, 30-ampere, 600-volt, oil immersed, fused, complete with 15-ampere fuses. Rowan type 620A.	Do.
B23-1023	Yale & Towne hand lift pallet truck, hydraulic operation, 27-inch overall width of forks, 48-inch length of forks, capacity 2,000 pounds. Composition covered "Flor-Savr" wheels, Model No. H2RP27-48.	Do.
B23-1024	Thomas Truck & Caster Co., Keokuk, Iowa, No. 90 Safety, 1-man barrel truck. Handle length, 62 inches; overall width, 23 inches; wheel size, 10-inch diameter by 2½-inch face rubber tired; capacity, 1,000 pounds.	Do.
B23-1025	Duplicate of B23-1024	Do.
B23-1026	Electric hotplate, single burner, 3-position control; high, medium, low. 110-volt, 60-cycle, single-phase, approximately 990, 660, 330 watts.	Do.
B23-1027	Plywood and lumber tray loader hopper, 3 feet 0 inch by 4 feet 0 inch by 2 feet 8 inches high, complete with stainless steel, type 304, basket unloading frame with shaft bearings and turnover handle.	Do.
B23-1028	Plywood and lumber tray loader, 6 feet 8 inches high by 3 feet wide by 6 feet long.	Do.
B23-1029	1 section of steel frame wooden roller conveyor, 24 inches wide and 12 feet long with end support legs; with No. 3 plain maple rollers, 2¾-inch diameter; ball bearings, 7/16 inch through hex shafts at 8-inch centers in 3½-inch by No. 10 gage channel.	Do.
B23-1030A	Proctor & Schwarts, Inc., 40 tray dryer as furnished Carbide & Carbon Chemical Corp., Ford, Bacon Davis, Agent, P. O. 1665, dated June 27, 1942 except with V-belt fan drive; complete with fan, V-belts and sheaves. Also 120 "Glastic" Chemical trays 20 inches by 30 inches by 1½ inches deep.	Periodic use by Davison.
B23-1030B	3-horsepower, totally enclosed motor, 220/440-volt, 3-phase, 60-cycle, horizontal squirrel-cage induction, 1,800 r. p. m. synchronous speed, normal starting torque, frame 225, GE "Triclad" type K.	Do.
B23-1030C	Combination motor starter with fused disconnect switch, oil immersed, 3-pole, 600-volt, 60-cycle, Rowan type 780 KBF, frame 50, complete with 15-ampere fuse and overload relay.	Do.
B23-1030D	Pushbutton switch, momentary contact, oil immersed, marked "Start-Stop," Rowan type 650, style A.	Do.

EXHIBIT No. 1.—*Major items of equipment, catalyst manufacturing plant, Baltimore, Md.*—Continued

IMPREGNATION EQUIPMENT—BUILDING NO. 23—Continued

RFC equipment No.	Equipment description	Status
B23-1030E	Control panel, 1 foot 9 inches wide by 6 feet 0 inch high, with two 13⅛-inch wide by 17⅛-inch high openings as per Davison Drawing B-12652.	Periodic use by Davison.
B23-1030F	Model 602P21 DDx, 2 pen recording thermometer, 0-100° C. mercury actuated, 24-hour revolution, 115-volt, 60-cycle, flush mounted; 10 percent throttling control on 1 record, with 40 feet of plastic armored tubing on each bulb, control bulb to be stainless steel with 10-inch extension neck and ¾-inch S. P. T. fitting approximately 10 inches above tip of bulb, other recording bulb to be stainless steel with plain bulb and 22-inch extension neck, with ¼-inch air reducing valve, ¼-inch air filter, and type 7 SLW diaphragm control air-o-motor operator.	Do.
B23-1030G	Model 602 PIDW-X, single pen wet bulb recorder controller 0 to 125° C. mercury actuated, 24-hour chart, 115-volt, 60-cycle, flush mounted, 10 percent throttling range, 40 feet of plastic armored tubing and No. 8-A86 wick and tank assembly, with ¼-inch air filter, ¼-inch air reducing valve and one 7 SLW diaphragm control air-o-motor operator.	Do.
B23-1031A	Tray dryer, duplicate of B23-1030A	Do.
B23-1031B	Motor, duplicate of B23-1030B	Do.
B23-1031C	Motor starter, duplicate of B23-1030C	Do.
B23-1031D	Pushbutton switch, duplicate of B23-1030D	Do.
B23-1031E	Control panel, duplicate of B23-1030E	Do.
B23-1031F	Recording thermometer, duplicate of B23-1030F	Do.
B23-1031G	Recording controller, duplicate of B23-1030G	Do.
B23-1032	Tray unloading hopper and frame constructed of type 304 stainless steel and mounted on legs with casters.	Standby.
B23-1033	Howe No. 2430TC1 all-metal tape drive dial warehouse scale, the dial graduated 1,000 pounds x 1 pound; tare beam, 200 pounds x 1 pound; capacity beam, 400 pounds x 200 pounds; total capacity, 1,600 pounds. Platform size, 46 inches by 38 inches. Scale levers contained in all welded steel full frame.	Do.
B23-1034	Howe No. 5717 moisture-proof short column bench-type tape drive dial scale. Dial graduated 250 pounds x ¼ pound; tare beam, 50 punds x ¼ pound; capacity beam, 100 pounds x 50 pounds. Platform size, 21 inches by 29 inches. Scale sealed with rubber gaskets and arranged with provision for use of small incandescent lamp to eliminate condensation.	Do.
B23-1035	Howe No. 5703 moisture-proof, long column portable tape drive dial scale. Dial graduated 500 pounds x ½ pound; capacity beam, 200 pounds x 50 pounds; platform, 21 inches by 29 inches, mounted on rubber tired wheels. Scale sealed with rubber gaskets and arranged with provision for use of small incandescent lamp to eliminate condensation.	Do.
B23-1036A	Westco pump for Westco condensate return unit, Fig. 6863 with pump base, coupling and Y-type strainer float switch.	Do.
B23-1036B	1-horsepower motor, 440-volt, 3-phase, 60-cycle	Do.
B23-1036C	Combination motor starter with fused disconnect switch, oil immersed, 3-pole, 600-volt, 60-cycle, Rowan type 780 KBF, frame 50, with 15-ampere fuses and overload relay.	Do.
B23-1036E	Float switch	Do.
B23-1036D	60-gallon receiver for Westco condensate return unit	Do.
B23-1037	Precipitation and wash tank, type 304 S. S., 4 feet 0 inch diameter by 6 feet 0 inch high with, sparger and collapsible internal decanting pipe.	Do.
B23-1038	Settling tank, type 304 S. S., 12 feet 0 inch long by 4 feet 0 inch wide by 2 feet 6 inches high, with mild steel angle iron frame. Mounted on concrete piers approximately 24 inches above floor.	Do.
B23-1039A	Worthington centrifugal pump, Worthite casing and impeller, Model 1-CGH-1A, rated 50 g. p. m., 50 p. s. i., complete with subbase and coupling.	Do.
B23-1039B	5-horsepower motor, 440-volt, 3-phase, 60-cycle induction motor	Do.
B23-1039C	Combination motor starter with fused disconnect switch, oil immersed, 3-pole, 600-volt, 60-cycle, Rowan type 780 KBF, frame 50, with 25-ampere fuses and overload relay.	Do.
B23-1039D	Pushbutton switch, momentary contact, oil immersed, marked "Start-Stop," Rowan type 650, style A.	Do.
B23-1040	Mechanical steam-flow meter, recording and integrating Model No. 222 TIF, Brown Instrument Co., to measure 100 p. s. i. g. steam at 6,000 pounds per hour maximum, with mercury, valve manifold, orifice, tapped flanges, condenser pots, and piping assembly.	Do.
B23-1041	Pressure regulating valve. (See B23-1003A)	Do.
B23-1042	2-inch CV Niagara cold-water meter with screwed couplings, cast-iron galvanized case, standard dial with integrator calibrated in U. S. gallons. Buffalo Meter Co.	Do.
B23-1043	Watt-hour meter, 2 element, front connected, 480-volt, 60-cycle, 50-ampere, for use in 3-wire delta circuit, GE type V-2-A. Cat. No. 97X300.	Do.

EXHIBIT No. 1.—*Major items of equipment, catalyst manufacturing plant, Baltimore, Md.*—Continued

IMPREGNATION EQUIPMENT—BUILDING NO. 23—Continued

RFC equipment No.	Equipment description	Status
B23-1045	Structural steel sling to take 52-inch pallets for lifting with monorail hoist.	Standby.
B23-1046	Safety disconnect switch, 3-pole, 100-ampere, 600-volt, oil immersed, Rowan type 620-A.	Do.
B23-1047A	Combination motor starter with fused disconnect switch, oil immersed, 3-pole, 600-volt, 60-cycle, manual reset, Rowan type 780 KBF, frame 50, complete with 15-ampere fuses, overload relays for 1-horsepower, 440-volt, 60-cycle motor. (For agitator Carbide No. L6D89-33).	Do.
B23-1047B	Pushbutton switch, maintained contact, oil immersed, marked "Stop-Start," Rowan type 650, style B.	Do.

ACID LEACHING FACILITIES—BUILDINGS 109 AND 110

B109-1200A	Water filter, 4 feet 0 inch diameter by 4 feet 0 inch high straight shell for operation at 80-pound water pressure. Complete with under piping, front piping, change flow valves, filter material, and rate-of-flow indicator.	Periodic use by Davison.
B109-1200B	Cation exchanger, 3 feet 0 inch diameter by 8 feet 6 inches high straight shell, rubber lined, for operation at 80-pound water pressure. Complete with Uscolite pipe under drain, 26 cubic feet of Amberlite No. IR120 Zeolite with Anthrafilt supporting bed, pressure gage, eductor, air relief, Uscolite front piping and 1½-inch size rubber-lined Hills McCanna valves to control flow and regeneration.	Do.
B109-1200C	Annion exchanger, 3 feet 0 inch diameter by 5 feet 0 inch high straight shell, rubber lined, for operation at 80-pound water pressure. Complete with Uscolite pipe under drain, 14 cubic feet of Amberlite IR4B, Zeolite with Anthrafilt supporting bed, pressure gate, eductor, air relief, Uscolite front piping and 1½-inch size rubber-lined Hills McCanna valves to control flow and regeneration.	Do.
B109-1200D	Weak acid regeneration tank, 27 inches in daimeter by 2 feet 6 inches high, rubber lined.	Do.
B109-1200E	Strong acid regeneration tank, 12 inches in diameter by 1 foot 6 inches, steel.	Do.
B109-1200F	Soda ash preparation tank for regeneration, 3 feet 6 inches in diameter by 3 feet 0 inch high, with eductor.	Do.
B109-1200G	Sump box, steel, rubber lined with orifice plate, back wash, rinse control valves and rate-of-flow indicator.	Do.
B109-1200H	Motor-driven lightning mixer with rubber covered shaft for use with the acid and soda ash preparation tanks. Motor for use on 110-volt, 60-cycle, single-phase current.	Do.
B109-1200J	Water meter for demineralization, Neptune Meter Co., 1-inch trident split case disk meter, complete with standard register and 1-inch couplings.	Do.
B109-1200K	Conductivity cell for demineralization	Do.
B109-1200L	Pushbutton switch, momentary contact, oil immersed, marked "Stop-Start."	Do.
B109-1200M	Coagulant chemical feeder, 8 inches I. D. by 9 inches high	Do.
B109-1201A	Worthington centrifugal pump, Model 1½ CN-52 to handle city water at 75 g. p. m. and provide 25 p. s. i. increase in pressure. Standard pump complete with base and coupling.	Do.
B109-1201B	3-horsepower motor, GE, 3,600 r. p. m., 440-volt, 3-phase, 60-cycle, totally enclosed motor, frame 224, type K.	Do.
B109-1201C	Combination motor starter with fused disconnect switch, oil-immersed, 3-pole, 600-volt, 60-cycle, manual reset, Rowan type 780 KBF, frame 50.	Do.
B109-1201D	Pushbutton switch, maintained contact, oil-immersed, marked "Start-Stop," Rowan type 650, style B.	Do.
B109-1202A	Treated water storage tank, mild steel, rubber lined, 10 feet-0 inch diameter by 10 feet-0 inch high, with float valve inlet control, Uscolite pipe connections for both filling and discharge and liquid level gage.	Do.
B109-1202B	Midget model levelometer complete with 65 feet of tubing. Calibrated in United States gallons. Liquid measured 60° F. water.	Do.
B109-1203A	Durichlor self priming pump, Model X3RES-104	Do.
B109-1203B	10-horsepower totally enclosed motor, 220/440-volt, 3-phase, 60-cycle, horizontal squirrel-cage induction, 1,800 r. p. m. synchronous speed, normal starting torque, frame 324, GE, "Tricad," type K.	Do.
B109-1203C	Combination motor starter with fused disconnect switch, oil-immersed, 3-pole, 600-volt, 60-cycle, manual reset, Rowan type 780 KBF, frame 100-B.	Do.
B109-1203D	Float switch, oil immersed, weather-resisting, dust-tight, 2-pole, 600-volt, Rowan type 600-1.	Do.
B109-1204A	Unit heater, D. J. Murray CI 2000, with ¼-horsepower motors	Do.
B109-1204B	Manual motor starting switch, 110-volt, 2-pole, in dust-tight and weather-resisting enclosure, GE CR1061H2A2 with heater, Cat. No. 9703-5G for 3-Ampere motor.	Do.

EXHIBIT No. 1.—*Major items of equipment, catalyst manufacturing plant, Baltimore, Md.*—Continued

ACID LEACHING FACILITIES—BUILDINGS 109 AND 110—Continued

RFC equipment No.	Equipment description	Status
B109-1205A	Unit heater, duplicate of B109-1204A	Periodic use by Davison.
B109-1205B	Motor starting switch, duplicate of B109-1204B	Do.
B109-1206A	Unit heater, duplicate of B109-1204A	Do.
B109-1206B	Motor starting switch, duplicate of B109-1204B	Do.
B109-1207A	Unit heater, duplicate of B109-1204A	Do.
B109-1207B	Motor starting switch, duplicate of B109-1204B	Do.
B109-1208A	Size 1¼ H utility blower with ½-horsepower, 115-volt, 60-cycle, single-phase, totally enclosed, ball-bearing motors, with Heresite coating on wheel and inside of housing, 800 c. f. m., at ¾-inch total pressure of HCL vapor.	Do.
B109-1208B	Manual motor starting switch, double pole, in dust-tight enclosure, GE type CR 1061 H2A2, complete with 9706 G heaters for ½-horsepower motor.	Do.
B109-1209A	Blower, duplicate of B109-1208A	Do.
B109-1209B	Motor starting switch, duplicate of B109-1208B	Do.
B109-1210A	Blower, duplicate of B109-1208A	Do.
B109-1210B	Motor starting switch, duplicate of B109-1208B	Do.
B109-1211	Yale gasoline fork truck, Model KG5IT-3GU, capacity 3,000 pounds at 24-inch load center; overall height collapsed, 90½ inches; maximum lift, 145 inches; complete with 360° revolving fork carriage, 46-inch type 1 forks.	Do.
B110-1300	Used rubber-lined steel tank, 13 feet 9 inches in diameter by 6 feet 6 inches high, conical top, with valves and flow control instruments.	Do.
B110-1301A	Used rubber-lined steel tank with closed top, 14 feet 0 inches in diameter by 13 feet 0 inches high.	Do.
B110-1301B	Small model levelometer equipped for constant air supply, complete with choke valve holder, pressure regulator and air filter.	Do.
B110-1302	Concrete tank with acid brick lining, approximately 20 feet long by 13 feet wide by 8 feet high.	Do.

SATURATOR EQUIPMENT—BUILDING 111

B111-1400	Saturator, plywood and lumber, 14 compartment, 7 feet wide by 29 feet long by 11 feet high, with 14 inlet, 14 outlet brass screens and 14 brass discharge gates.	Periodic use by Davison.
B111-1401	Duplicate of B111-1400	Do.
B111-1402A	Fan, American Blower Model 750 E, rated at 17,000 c. f. m. at 5¼-inch S. P., belt driven, with LS wheel arrangement.	Do.
B111-1402B	Motor, 30-horsepower GE, 220/440-volt, 3-phase, 60-cycle, totally enclosed.	Do.
B111-1402C	Combination motor starter with fused disconnect switch, oil-immersed, 3-pole, 600-volt, 60-cycle, Rowan type 780 KBF, frame 150-C, complete with manual reset.	Do.
B111-1402D	Pushbutton switch, momentary contact, oil-immersed, marked "Start-Stop" Rowan type 650, style A.	Do.
B111-1403	Size 80410 American Blower air washer, complete with galvanized steel casing, welded steel tank, overflow and drain connection, eliminators; 2 banks of centrifugal nozzles, 1 set of flooding nozzles, inlet louvers, access door, suction strainer, marine light and make up water connection with float valve. To handle 17,000 c. f. m. of air and 200 g. p. m. of water.	Do.
B111-1404A	Size 2½-CF-1 Worthington centrifugal pump with base and coupling, to handle 180 g. p. m. at 75 feet total head, water temperature 100° F.	Do.
B111-1404B	7½-horsepower GE, 1,750 r. p. m. squirrel-cage induction motor, totally enclosed for operation at 440 volts, 3-phase, 60-cycle.	Do.
B111-1404C	Combination motor starter with fused disconnect switch, oil-immersed, 3-pole, 600-volt, 60-cycle, Rowan type 780 KBF, frame 50.	Do.
B111-1404D	Pushbutton switch, momentary contact, oil-immersed, marked "Start-Stop," Rowan type 650, style A.	Do.
B111-1405	Water heater, Schutte-Koerting, Fig. 320, continuous 1¼-inch size with screwed connections complete with nonseating water control spindle to heat 41 g. p. m. water from 95° to 210° F. with 52 p. s. i. g. steam pressure and maximum of 80 p. s. i. g. back pressure on discharge side of heater. All bronze construction.	Do.
B111-1406	Temperature regulator, 1¼-inch, No. 999 Sylphon; temperature range 140° to 200° F.; stainless steel trimmed valve for 125-pound steam pressure.	Do.

AGREEMENT OF LEASE

This agreement, made and entered into this 25th day of March, 1955, by and between RUBBER PRODUCING FACILITIES DISPOSAL COMMISSION (hereinafter called the "Commission"), an instrumentality of the United States created by Act of Congress (Public Law 205, 83d Cong., 67 Stat. 408), hereinafter sometimes called the "Disposal Act"), and having an office for the transaction of business in Washington, D. C., party of the first part, and PUBLICKER INDUSTRIES, INC. (hereinafter called "Publicker"), a corporation of the State of Pennsylvania and having a general office at Philadelphia, Pennsylvania, party of the second part:

WITNESSETH:

Whereas the Commission is authorized by section 9 (f) of the Disposal Act to lease alcohol-butadiene facilities owned by the Government, subject to certain conditions as provided in said Section 9 (f); and

Whereas Publicker has offered to lease, for a term of three (3) years and under certain terms and conditions, the Government-owned alcohol-butadiene facility located at Louisville, Kentucky, known as Plancor 1207, now administered in accordance with the provisions of the Rubber Act of 1948, as amended, by Federal Facilities Corporation (hereinafter called "FFC"), an instrumentality of the United States, which Plancor since July 1953 has been maintained in standby at Government expense; and

Whereas Publicker has represented that it is prepared to take over Plancor 1207 as lessee as soon as it has been determined that the disposal program for the sale of the Government-owned rubber producing facilities recommended on January 24, 1955, to the Congress by the Commission under the Disposal Act is to become effective, at a basic rental of $6.00 per short ton on all alcohol-butadiene produced, with a minimum guaranteed monthly rental of $1,000, Publicker to maintain at its own expense all parts of the Plancor used in its private operations and to maintain at the expense and under the direction of the Government those parts of the Plancor not used by Publicker in its private operations, so that the entire facility will be readily available for use in a national emergency; and

Whereas FFC, at the request of the Commission, has agreed to take all action essential to enable Publicker to take possession as lessee hereunder and to contract with Publicker for the standby maintenance required to be handled at Government expense; and

Whereas the Commission has determined that such a lease to Publicker is desirable, in that it offers to the Government an opportunity to reduce its overall costs of maintaining Plancor 1207 in standby, while at the same time affording income from the use thereof for production of additional alcohol-butadiene for the market, all without sacrifice to the interests of national security:

Now, therefore, in consideration of the mutual covenants herein contained, it is agreed by and between the parties as follows:

SECTION 1. (a) The term "Commission" as used herein shall mean the Rubber Producing Facilities Disposal Commission or, if it shall have ceased to exist, such other agency of the United States of America as the President shall have designated to administer the contracts and leases and other matters involving the Commission.

(b) The term "Government" as used herein shall mean the United States of America or any department, agency, officer or instrumentality thereof.

SEC. 2. Subject to the terms hereof, the Commission hereby leases to Publicker and Publicker hereby leases from the Commission all real, personal or mixed property owned by the United States and now administered by FFC and constituting, located at, or connected with the Louisville, Kentucky Government-owned alcohol-butadiene plant (Plancor 1207) located on Hughes Camp Ground Road in Jefferson County, Kentucky, as same now exists, together with any and all additional property of any nature charged to said Plancor after the date hereof by FFC; being part of the same property conveyed to the Defense Plant Corporation by deeds dated April 29, 1944, September 19, 1942 and September 23, 1942 and recorded in Deed Book 1937 page 413, Deed Book 1837 page 199, and Deed Book 1838 page 283, respectively, in the office of the Clerk of the County Court of Jefferson County, Kentucky.

Provided, however, That this lease is made expressly subject to all existing easements, rights of way and licenses over, under or across said Plancor 1207 property, and all restrictive covenants, reservations, or grants now of record pertaining to said Plancor 1207 property: *And provided further*, That this lease is made with the express understanding between the Commission and Publicker that the Commission has contracted to grant to American Synthetic Rubber Corporation an appropriate, permanent easement over a portion of said Plancor

1207 property in a deed to be executed, delivered, and recorded when and if the sale of the copolmyer plant at Louisville, Kentucky (Plancor 1278), to American Synthetic Rubber Corporation, as heretofore recommended to the Congress by the Commission, becomes fully effective.

SEC. 3. This lease shall become operative as of 7:00 o'clock A. M., E. S. T., of the day (which shall not be later than the 10th day of the transfer period specified in Section 7 (i) of the Disposal Act) on which Publicker is notified that possession may be taken by Publicker, and shall continue in force for a term of three (3) years thereafter, subject to termination as hereinafter provided.

SEC. 4. Publicker intends to operate the Leased Property, to the extent commercially feasible, for the production of alcohol-butadiene, and hereby agrees to pay rent therefor at the rate of Six Dollars ($6.00) for each short ton (2,000 pounds avoirdupois) of butadiene produced by Publicker at Plancor 1207: *Provided, however*, That Publicker shall be liable in any event for a minimum monthly rental of One Thousand Dollars ($1,000). Such rental shall be paid quarterly not later than twenty (20) days following the close of each quarter-annual period on the entire tonnage of butadiene produced in such period. The first such rental payment shall be made not later than twenty (20) days following the close of the first quarter-annual period after possession has been taken by Publicker. Rentals shall be made payable to such representative of the Commission as the Commission shall prescribe by notice in writing to Publicker.

Additional rental shall be paid by Publicker on any marketed product other than alcohol-butadiene (including any byproducts of any kind whatsoever), and for any income-producing service rendered by Publicker which results from use or operation by Publicker of the Leased Property, the amount of any such additional rental to be negotiated between Publicker and the Commission as and when any such production develops or as and when any such service is proposed to be furnished.

SEC. 5. So long as this lease remains in force, Publicker shall maintain separate accounts and operating records to the extent required by the Commission and in form satisfactory to the Commission covering (i) the production of alcohol-butadiene and any other marketed products, including byproducts, produced through the use or operation of the Leased Property, and (ii) such other necessary data and records as may bear upon the respective rights and obligations of the Commission and Publicker under this lease. Publicker agrees to make available during the term of this lease and for a period of three (3) years thereafter to the Commission for audit and inspection its records pertaining to the use and operation of the Leased Property and all other information required to be kept by Publicker, and to furnish the Commission with such excerpts therefrom or copies thereof as the Commission may request.

SEC. 6. Upon execution and delivery of this lease, a survey and inventory of the Leased Property, including, but not limited to, all supplies, machinery, equipment and tools embraced therein, shall be made by a representative of the Commission and a representative of Publicker. Said survey and inventory shall be approved in writing by Publicker and the Commission, and upon approval, a copy thereof shall be attached hereto and become a part hereof, as fully as if originally incorporated herein. There shall be added to said survey and inventory from time to time such additional property, fixtures and installations as are furnished by or at the expense of the Government, or which become Government property under the terms of this lease. At the expiration or termination of this lease, a similar survey and inventory shall be prepared and approved, said survey and inventory to constitute the basis for final settlement by Publicker with the Commission for accountability for Leased Property, including property which Publicker shall be required to restore or replace under this lease. Any such property shall be either replaced and/or restored or, at the election of the Commission, reimbursement therefor shall be made in cash by Publicker at the then current market value of property of like kind, quality and condition.

Supplies, spare parts, and other items included in the survey and inventory which are currently used by Publicker shall be either replaced by supplies, spare parts and items of like kind, quality and condition to those so used by Publicker, or at the election of the Commission, reimbursement therefor in cash shall be made by Publicker at the then current market value quarterly not later than twenty (20) days following the close of each quarter-annual period hereunder.

SEC. 7. (a) Publicker shall neither transfer nor assign this lease, nor sublet the Leased Property or any part thereof, nor grant any interest, privilege or license whatsoever in connection therewith: *Provided*, That this paragraph shall not prohibit Publicker from assigning this lease to a wholly-owned subsidiary of

Publicker pursuant to an instrument of assignment satisfactory to the Commission: *And provided further*, That this paragraph shall not prohibit Publicker, for its own account or under any such other arrangements as it may deem desirable, from dispensing and selling food, soft drinks, tobacco products, confectionery, and similar articles to the employees of Publicker on the Leased Property.

(b) The Commission may assign this Lease to any other agency of the Government.

SEC. 8. The Commission reserves the right at any reasonable time to enter the Leased Property for the purpose of inspection and inventory and when otherwise deemed necessary for the protection of the interests of the Commission.

SEC. 9. The Commission shall not be responsible for damages to the property of Publicker nor for damages to the property or injuries to the person of Publicker's officers, agents, servants or employees or other persons on the Leased Property as invitees or licensees of Publicker arising from the use of the Leased Property by Publicker, and Publicker shall indemnify and save the Commission harmless from any and all such claims. The Commission shall not be responsible for damages to any persons or property off the Leased Property arising from Publicker's use of the Leased Property and Publicker shall indemnify and save the Commission harmless from any and all claims for such damages.

SEC. 10. Subject to reservation in behalf of the Government of continuance of all its rights in and under the agreement referred to below, and to be effective not earlier than the time that Publicker takes possession of the Facility, the Commission at Publicker's request will promptly request such party or parties to the aforesaid agreement as Publicker shall specify to offer a license and/or immunity to Publicker under and in accordance with "The General Agreement on Exchange and Use of Technical Information Relating to Butadiene, dated February 5, 1942."

SEC. 11. Publicker has inspected and knows the condition of the Leased Property and it is understood that the same is hereby leased without any representation or warranty by the Commission whatsoever.

SEC. 12. All portions of the Leased Property being used or operated by Publicker in its private business shall at all times be maintained in good operating condition by and at the sole expense of Publicker and said portions of the Leased Property shall be kept in as good order and condition as that existing upon the date possession of the Leased Property was delivered to Publicker. All portions of the Leased Property not being so used by Publicker shall be maintained in standby condition, by and at the expense of FFC, in accordance with the Protection and Maintenance Contract of even date herewith by and between Publicker Industries, Inc., and FFC. Publicker shall give FFC notice in writing of its desire to use or operate any part of the Leased Property which at the time of such notice is in standby condition, and shall bear the entire costs of (a) reactivating any such part for such use or operation; plus (b) any costs of subsequent reconversion thereof back into standby condition (if such reconversion shall be required under the terms of this lease); plus (c) all maintenance costs allocable to any such part of the Leased Property from the date of such written notice until such reconversion thereof back into standby.

Publicker hereby expressly agrees that at any time when the Commission has before it a bona fide written offer from a third party to lease any of the Leased Property not then being used or operated by Publicker in its private business (which offer must be at least as favorable to the Commission as the terms hereof for the use or operation by Publicker of such unused portions), Publicker shall, upon written notice from the Commission that it has such an acceptable offer of lease for such unused portion, accompanied by a copy of such written off of lease, immediately notify the Commission in writing that it will (a) pay, in addition to all sums otherwise to be paid as rental hereunder, an amount which will make the total amount payable by Publicker equal to the rental payable under such offer of lease for the term specified therein, and assume full responsibility forthwith at its sole expense for the maintenance of the unused portion of the Leased Property which is the subject of the offer of lease, or (b) waive any rights under this lease for future use or operation by Publicker of such unused portion of the Leased Property for the period wherein such portion is operated by such third party.

SEC. 13. With prior written approval of the Commission, Publicker may make changes, alterations, replacements and improvements to the used or operated portions of the Leased Property at its sole expense, provided that (a) the Leased Property will not thereby be rendered unsuitable for the production of alcohol-butadiene; (b) the actual productive capacity of the Leased Property will not thereby be reduced; and (c) any such changes, alterations, replacements or im-

provements will not prevent Publicker from fulfilling its obligations to return the Leased Property within a period of 120 days to the condition required by Section 12 of this lease. Publicker shall prepare and maintain adequate drawings showing the location and connections and other installation data of each item or part thereof connected or removed from its installed location, and Publicker shall tag for identification purposes each item or part thereof so removed to insure the minimum of time an expense in restoration. All such changes, alterations, replacements or improvements shall become the property of the Government when made, except that any machinery and equipment not used in the production of alcohol-butadiene which shall have been installed at Publicker's expense shall remain Publicker's property, and may be removed by Publicker at the termination or expiration of this lease.

SEC. 14. If, during the term of this lease, the Leased Property or a substantial part thereof, is, without negligence on the part of Publicker, destroyed or rendered unfit for occupancy or for the purpose for which it was leased by any cause whatsoever, then this lease may, at the option of Publicker, be terminated and, in the event of the election of this option to terminate, the obligation of Publicker to pay rental and to maintain the used portions of the Leased Property shall cease as of the date the said property was so destroyed or rendered unfit for occupancy or for the purpose for which it was leased. Nothing in this paragraph 14 shall relieve Publicker of its obligation to maintain, repair, replace or restore the Leased Property, or any part thereof, under the other provisions and conditions of this lease. Nothing in this paragraph 14 shall obligate the Commission to repair or restore the Leased Property, or any part thereof.

SEC. 15. For such period as Publicker is in possession of the Leased Property pursuant to the provisions and conditions of this Lease, Publicker shall procure and maintain at its cost insurance on the operated portions of the Leased Property as follows: fire and extended coverage insurance (including vandalism and malicious mischief), steam boiler and machinery insurance (including steam piping), in amounts to be agreed upon between Publicker and the Commission. Publicker shall procure such insurance from any responsible company or companies satisfactory to the Commission. The policy or policies evidencing such insurance shall provide that in the event of loss thereunder the proceeds of the policy or policies shall be payable to Publicker to be used solely for the repair, restoration or replacement of the property damaged or destroyed unless the Leased Property or a substantial part thereof has been destroyed and the Commission elects by notice in writing to Publicker within thirty (30) days after the damage or destruction occurs, to waive such repair, restoration or replacement by Publicker, in which event such proceeds shall be paid to the Commission; provided, however, that the insurer, after payment of any proceeds to Publicker in accordance with the provisions of the policy or policies shall have no obligation or liability with respect to the use or disposition of the proceeds by Publicker. Nothing herein contained shall be construed as an obligation upon the Commission to repair, restore or replace the Leased Property, or any part thereof.

SEC. 16. Upon the expiration or other termination of this lease, Publicker shall, if required by the Commission, at its sole expense (a) remove such of its property as has not become the property of the Government under the terms of this lease and within the shortest possible time, but in no case in excess of 90 days from the date written notice of termination is received or from the date of expiration, and (b) restore to standby condition the portions of the Leased Property in use or operation at the time of such expiration or termination to as good order and condition as that existing upon the date of commencement of the term of this lease, less ordinary wear and tear and less damage occasioned by casualty against which Publicker cannot obtain insurance, except for damage to the Leased Property covered by insurance and for which the Commission shall have elected to receive insurance funds in lieu of having the damaged property repaired, replaced, or restored. If Publicker shall fail or neglect to remove its property or to so restore to standby condition the Leased Property, as herein provided, then the Commission may cause the property of Publicker to be removed and the Leased Property to be restored to standby condition, and the cost of such removal and restoration shall be paid by Publicker to the Commission upon demand, and no claim for damages against the Commission or its officers or agents shall be created by or made on account of such removal and restoration. Publicker agrees that, at the Commission's request, it will turn over to the Commission the portions of

the Leased Property which are in operation at the time of such termination or expiration in their then operating condition, in which event Publicker shall be discharged from any responsibility to restore such portions to standby condition.

SEC. 17. Publicker shall at all times exercise due diligence in the protection of the Leased Property against damage or destruction by fire, sabotage, and other causes.

SEC. 18. Publicker shall pay to the Commission, when and as the same become due and payable, all taxes, assessments, and similar charges which, at any time during the term of this lease, may be taxed, assessed, or imposed with respect to the used or operated portions of the Leased Property.

SEC. 19. The Commission may terminate this lease at any time by giving thirty (30) days' written notice to Publicker (a) in the event the President of the United States determines that termination of this Lease is necessary in the national interest, or (b) in the event Publicker violates any of the terms and conditions of this lease and continues and persists therein for thirty (30) days after notice thereof in writing by the Commission, or (c) in the event of termination of the Protection and Maintenance Contract between Publicker and FFC. In the event of recapture of the Leased Property by the Government upon termination pursuant to clause (a) *supra*, Publicker (i) shall be entitled to reimbursement from the Government in an amount equivalent to any reimbursable expenditures which Publicker, with prior written approval of FFC, may have incurred with respect to the Leased Property, and for which it shall not theretofore have received payment, and (ii) shall be released from any obligation to restore the Leased Property to standby condition.

SEC. 20. (a) Publicker will at all times during the term of this Lease at its own expense maintain, in accordance with paragraph 12 of this Lease, all parts of the Leased Property being used or operated by it, together with all replacements thereof and additions and improvements thereto, so that the same shall be at all times during said term in condition to produce alcohol-butadiene at a rate of not less than 20,000 short tons per year per line operated; and for the account of FFC shall maintain at all times during said term, in accordance with said paragraph 12 and the Protection and Maintenance Contract with FFC, all nonoperated parts of the Leased Property, together with all replacements thereof and additions and improvement thereto, so that such non-operated parts can be placed in condition to produce alcohol-butadiene at a rate of not less than 20,000 short tons per year per nonoperated line within a period of one hundred twenty (120) days after written notice from the Government.

(b) During the existence of any national emergency, present or future, declared by the President or the Congress of the United States, or in the event the Government determines that it is necessary in the interest of national defense, Publicker shall, within sixty (60) days after receipt of written notice from the Government, furnish the Government such alcohol-butadiene produced by operation of the Leased Property (including the entire production therefrom if requested by the Government) at prices to be agreed upon between the parties, but which in no event shall exceed the then current market price of alcohol-butadiene.

SEC. 21. Publicker warrants that it has not employed any person to solicit or secure this lease upon any agreement for commission, percentage, brokerage or contingent fee. Breach of this warranty shall give the Government the right to annul this lease, or, in its option, to collect from Publicker the amount of such commission, percentage, brokerage, or contingent fee, in addition to the consideration herein set forth. This warranty shall not apply to commissions payable by Publicker to *bona fide* established commercial or selling agencies maintained by Publicker for the purpose of securing this lease.

SEC. 22. All notices to be given pursuant to this lease shall be made in writing and shall be addressed, if to Publicker, to Treasurer, Publicker Industries, Inc., 1429 Walnut Street, Philadelphia 2, Pa., and if to the Commission, to Chairman, Rubber Producing Facilities Disposal Commission, 811 Vermont Avenue N. W., Washington 25, D. C., or as may from time to time otherwise be directed by the parties. Notice shall be deemed to have been duly given only if and when enclosed in a properly sealed envelope wrapper, addressed as aforesaid, marked as registered mail, and deposited postage prepaid in any United States Post Office.

SEC. 23. No Member of or Delegate to the Congress or Resident Commissioners of the United States of America shall be admitted to any share or part of this

lease or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this lease if made with a corporation for its general benefit.

In witness whereof, the parties hereto have executed this lease this 25th day of March 1955.

RUBBER PRODUCING FACILITIES DISPOSAL COMMISSION,
By (s) HOLMAN D. PETTIBONE,
(s) LESLIE R. ROUNDS,
(s) EVERETT R. COOK,
Constituting All of the Members Thereof.

PUBLICKER INDUSTRIES, INC.,
By (s) L. J. GUNSON,
Treasurer

Attest:
[SEAL]
(s) A. E. LANG,
Assistant Secretary.

PROTECTION AND MAINTENANCE CONTRACT

THIS CONTRACT, executed the 25th day of March 1955, by and between FEDERAL FACILITIES CORPORATION, an agency and instrumentality of the United States (hereinafter called "FFC"), and PUBLICKER INDUSTRIES, INC., a Pennsylvania corporation (hereinafter called "Publicker");

Witnesseth:

Whereas Publicker has entered into a lease (hereby incorporated herein by reference thereto) of even date herewith (hereinafter called the "Lease") with the Rubber Producing Facilities Disposal Commission (hereinafter called the "Commission"), with respect to the Government-owned alcohol-butadiene plant (Plancor 1207) located at Louisville, Kentucky; and

Whereas under the terms of the Lease it is necessary that FFC contract with Publicker with respect to the maintenance in standby condition of all or any portion of the "Leased Property" (as defined in the Lease) not used or operated by Publicker under the provisions of the Lease for private purposes (which such private use or operation shall be referred to herein as "Private Use"); and

Whereas the Leased Property is presently being maintained in its entirety in extended standby condition for the account of FFC by Carbide & Carbon Company, a division of Union Carbide & Carbon Corporation (hereinafter called "Carbide"), under the terms of an Operating Agreement between FFC and Carbide; and

Whereas Carbide will vacate said plant upon request of FFC.

Now, therefore, in consideration of the premises and the mutual promises contained herein, FFC and Publicker agree as follows:

(1) The term "Plant" as used in this Protection and Maintenance Contract shall mean all or any portion of the Leased Property not being used or operated for Private Use.

(2) Under the terms of this Protection and Maintenance Contract, Publicker shall perform all work and services necessary to protect, preserve, maintain and manage the Plant in extended standby condition in accordance with the best accepted industrial practices, within the approved budgetary amounts referred to hereafter and in accordance with such general instructions as may be issued from time to time by FFC, including but not limited to: (a) performance of such services as may be reasonably necessary in connection with periodic standby operation under power of certain machinery and facilities in the Plant; and (b) furnishing all necessary utilities, services, equipment, materials, and supplies as and when required hereunder. In addition, Publicker shall perform such further work and services for and in connection with any utilization of the Plant by FFC while in standby condition, as may be requested by FFC from time to time, within approved budgetary amounts and in accordance with general instructions issued by FFC.

(3) Not less than thirty (30) days prior to the date Publicker is to take possession of the Plant under the Lease and not less than sixty (60) days prior to the beginning of each July 1 and January 1 during the term of the Lease, Publicker shall submit to FFC a detailed statement of activities proposed to be conducted in performance of this Protection and Maintenance Contract during the succeeding six-months' period involved, together with a detailed budget therefor, which, to the

extent possible, should never exceed (upon a basis of all the Leased Property being in standby hereunder), a total of $150,000 for any particular six-months' period. Such budget shall list any real-estate taxes to be paid, the amount of which, however, shall be independent of and shall not affect said $150,000 limitation. FFC shall forward written notice to Publicker of its decision with respect to a statement and budget, within forty (40) days after receipt thereof by FFC, except with respect to the initial budget, as to which FFC shall forward written notice of its decision within twenty (20) days after receipt thereof by FFC. The statements and budgets shall be submitted in such form and detail as may be required by FFC.

(4) Upon monthly submission of proper invoices supported by such evidence and certified in such manner as FFC may require, FFC will reimburse Publicker for all expenditures incurred and made by Publicker to others in connection with performance hereunder, provided such expenditures were listed or otherwise contemplated in a budget submitted in accordance with paragraph (3) above and were approved by FFC in writing in advance of the six-month period involved. Emergency budgets may be submitted at any time. Only net expenditures shall be reimbursable and Publicker shall exercise diligence in obtaining the benefit of all discounts, refunds and other credits applicable to any expenditures. Except with the prior written approval of FFC, Publicker shall not be reimbursed for any expenditure not incurred directly at the site of the Plant. Publicker shall never receive any fee, management charge or similar compensation for performance hereunder.

(5) Publicker shall maintain separate books and records of account in accordance with good accounting methods and practices, covering all performance hereunder. FFC or its nominees shall have the right at all reasonable hours to audit and inspect such books and records, and shall have access to the Plant for inspection and other purposes at any time.

(6) In all performance hereunder Publicker shall act as an independent contractor and all employees engaged in carrying out the work to be performed hereunder shall be the employees of or retained by Publicker and shall not be employees of FFC for any purpose whatsoever.

(7) Publicker shall not be liable for any loss or damage to the Plant resulting in connection with its performance under this Protection and Maintenance Contract or to the alcohol referred to in Section (12) hereof provided such loss or damage does not result from the willful or grossly negligent act of Publicker or any of its employees or does not result from the failure of Publicker to perform hereunder as contemplated.

(8) FFC shall reimburse Publicker any amounts paid by Publicker (including all direct expenses incident thereto) for any injury to, or death of any person or persons or any damage to or destruction of property, the liability for which is incurred by Publicker during the term hereof and arising through its performance under this Protection and Maintenance Contract, but only to the extent that (i) Publicker is legally liable for any such damages as determined by due process of law or pursuant to a settlement made with the express approval of FFC, and Publicker is actually out of pocket therefor without indemnity of any kind through insurance coverage or otherwise, (ii) Publicker has not failed to carry insurance coverage as directed by FFC, and (iii) any representative of Publicker in a supervisory capacity at the Plant, acting within the scope of his authority and employment, has not been guilty of bad faith or willful misconduct.

(9) In addition to the rights of termination recited in the Lease, FFC shall also have the right to terminate this Protection and Maintenance Contract and the Lease at any time during the term hereof in the event Publicker fails to perform in any particular hereunder, upon ten (10) days' written notice to Publicker and failure of Publicker to cure such default within thirty (30) days thereafter. Further, this Protection and Maintenance Contract shall terminate automatically in the event of any termination of the Lease.

(10) Publicker shall never sublet the Plant or any portion thereof; nor shall Publicker ever use the Plant for its private business or any other use not contemplated hereunder, except as otherwise provided in the Lease. Publicker shall not remove any property of the Plant from the site of the Plant nor add or place any property thereon, except as required or permitted in connection with performance under this Protection and Maintenance Contract. Nothing herein or in the Lease shall preclude FFC from making such use of the Plant as will not interfere with Publicker's rights under the Lease.

(11) This Protection and Maintenance Contract is not assignable by Publicker except that Publicker may, with the prior written consent of FFC, assign same

to a wholly owned subsidiary of Publicker under an instrument of assignment satisfactory to FFC. FFC may assign this Protection and Maintenance Contract to any other agency of the Government. Publicker represents that it is empowered to execute this contract and is authorized and able to perform the same as herein contemplated.

(12) Publicker shall protect and handle hereunder all alcohol owned by FFC and currently stored at the Plant (estimated at approximately 7,000,000 gallons). Nothing under the Lease shall permit Publicker to use for Private Use the tanks in which said alcohol is stored so long as FFC elects to so store said alcohol at the Plant.

(13) The term of this Protection and Maintenance Contract shall be coextensive with the term of the Lease. FFC shall terminate its Operating Agreement with Carbide in ample time to enable Publicker to enter into possession at the time specified in the Lease.

(14) Publicker agrees: (a) to comply with and give all stipulations and representations required by applicable Federal laws, orders, rules and regulations; (b) that, insofar as applicable, the representations and stipulations required by the Act of June 30, 1936 (49 Stat. 2036; U. S. Code, Title 41, Sections 35–43, Walsh-Healey Act) to be included in all contracts therein specified are hereby incorporated and made a part of this contract with the same force and effect as if fully set forth herein; (c) that no member of or delegate to Congress of the United States of America shall be admitted to any share or part of this contract or to any benefit that may arise therefrom, but this provision shall not be construed to extend to the contract if made with a corporation for its general benefit; and (d) to use only articles, materials, or supplies manufactured in the United States, in sufficient and reasonably available commercial quantities and of a satisfactory quality, unless FFC shall determine their purchase to be inconsistent with the public interest or their cost unreasonable. Publicker represents and warrants that it has not employed or retained any person (other than a full-time bona fide employee working solely for Publicker) or a selling agency (other than a bona fide established commercial or selling agency maintained by Publicker for the purpose of securing business) to solicit or secure this contract, and that it has not paid or agreed to pay to any other person or selling agency except as above indicated, any fee, commission, percentage, brokerage or contingent fee involving, or in any way related to, the award of this contract. For breach or violation of this warranty, FFC shall have the right to annul this contract and the Lease without liability or, in its discretion, to deduct from any reimbursements due Publicker hereunder, the full amount of such fee, commission, percentage, brokerage or contingent fee. In connection with the performance of work under this contract, Publicker agrees not to discriminate against any employee or applicant for employment because of race, religion, color or national origin. The aforesaid provision shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Publicker agrees to post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by FFC setting forth the provisions of the nondiscrimination clause. Publicker further agrees to insert the foregoing provision in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials.

Executed the day and year aforesaid by the duly authorized representatives of FFC and Publicker and under their respective corporate seals.

FEDERAL FACILITIES CORPORATION,
By (s) E. D. KELLY,
Director, Office of Synthetic Rubber.

Attest:
[CORPORATE SEAL]
(s) DOUGLAS S. SHERWIN,
Secretary.

PUBLICKER INDUSTRIES, INC.,
By (s) L. J. GUNSON,
Treasurer.

Attest:
[CORPORATE SEAL]
(s) A. E. LANG,
Assistant Secretary.

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